

The Perfection of  
**Military Discipline,**

After the Newest Method;

As Practiced

In **England and Ireland, &c.**

O R,

The Industrious **SOULDIER's** Golden  
Treasury of Knowledge in the Art of making **WAR.**

**CONTAINING,**

Instructions for the Exercising the Pike and Musket in all their Postures, with the Signs of the Drum, by its beating the several Points of War; the Exercise of Grenadiers, Horse, and Dragoons: The Explanation of the Words of Command, and how to be put in Practice: The manner of drawing up in several Forms of Battel: The various Fireings and Advantages to be gained thereby: The several Doublings, Wheelings, and drawing up of Battalions, Squadrons of Horse, &c. with the Conduct of Armies in open, or enclosed Countries, or upon any Occasion or Emergency, how the detached Party and Officers, &c. ought to carry themselves. Several ways of Encampment; opening difficult Passes, taking Castles, passing Bridges, opposing Towns, or Fortresses. The Method to be observed in Garrisons, and the manner of Fortification, with that of besieging strong Holds, &c.

**To which is added, as a Second Part,**

*The Art of Gunnery; or, The Complete Engineer, shewing the Practice of the Ordnance, Mortars, &c. with the manner of making and using Fire-works for War, at Sea and Land, and many other things.*

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*The Second Edition Corrected, with large Additions in both Parts.*

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*Job. 12.*

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# THE P R E F A C E.

**T**HE Profession of Arms has in all Ages been in such Esteem, that the great Men of the World have made it their Study, Emperours and Kings have preferred the Name of a Souldier above the rest of their glorious Titles; and indeed, the Sword is properly the Bullwark of a Kingdom, without which, the Laws would prove weak and ineffectual; for did not the Violaters fear that Power, which is of force to compel them to undergoe the Penalties of the Laws, they would esteem them but a dead Letter: And to speak more plain, The Souldier is the Guard of Liberty, Property, and what ever is dear to Mankind, as being at all times ready to sacrifice his Life for the Defence of his Country; nor are the Advantages small, that may incite Men to the Study of the Military Art, for it is often seen, that Persons of mean Birth and Fortune,

## The P R E F A C E.

have by their Courage and Industry become great Commanders, and many times Generals of Armies: Courage, indeed, is a great Qualification in the profession of Arms, but without Experience it frequently do's hurt, and rarely raises a Man to any considerable Station; but joyned with Experience, and kept within bounds, it wants but Opportunity to make him Eminent; though many Books of this kind have appeared in the VWorld, yet, being either of an extraordinary Price, or wanting somewhat New, and necessary to be known, we thought fit, especially for the Instruction of young Souldiers, to compile in a small Volume such a Body of Military Discipline, &c. as at this time is Practicall, and approved by the great Captains of this Age, that they may be able to understand their Duty, and perform it with Exactness and Dexterity; so that being well grounded in the most necessary and honourable Art, their Courage, Zeal, and Loyalty, may not only frustrate the Projects of our Enemies abroad, and at home, but render these Kingdoms dreadful to our Neighbours, and Happy in themselves.

The Perfection of  
**MILITARY DISCIPLINE**  
 After the Newest Method,  
 As Practised  
 In **England** and **Ireland**, &c.

**T**HE most promising things to Preference in this great Art, are, Valour and Obedience; for it is not only very commendable when occasion offers to fight valiantly, but likewise to obey patiently, the latter being looked upon as a great Virtue; to these Experience, acquired by Labour, and Industry, being joyned, Difficulties will the easier be overcome; a Man may indeed, a long time bear Arms, and yet be ignorant in many things he ought materially to know; but an Industrious Mind will accomplish much in a short time.

There are several things in the *Military Art* to be considered; and in the first place, those properly called the Senses, by which we receive Advertisment, as the Eye and the Ear; and in this case a strict Observance, and Silence is required, that the one and the other may not be mistaken. The Signs used in War, are

commonly three, viz. *The Voice, which conveys the Word of Command to the Ear. The Trumpet, or Drum, which by certain Sounds and Beats, give notice to the Cavalry and Infantry, what is to be done. And the last is, The Hand, Colours, or other Signs, which inform the Eye*; and these are called, *Vocal, Semi-vocal, and Mute*, and these must be perfectly understood, or else by mistake, or not knowing what to do, a Souldier may run into great Error, especially in Battel, losing himself, and being the occasion of the loss of others: But of this more hereafter.

When it happens that a Regiment has the Word of Command to draw out, then ought the Major, or Adjutant, to assign each Company its proper Post; and this must be done by placing the eldest Company upon the Right, and the next on the Left, and so in order to the youngest, who by this means will come into the Centre, and every Company, or Body of Men are to be drawn up in the beginning at the same order they march at, as well in Rank, as File, the single Companies taking notice to leave so much room as the Serjeants and Drums may place themselves in, on the right and left of each Company: Then observe, before you form your Battalions, to draw up from every Company the odd Men, forming in Opposition, a Rank at fifty paces in distance from the head of each Company, that no broken Files may appear; and by this means with more speed and dexterity you may complete the Files.

The Battalions may be form'd, the Companies disposed in order, as aforesaid, by these Words of Command, viz. 1. Have a care to form the Battalion. 2. Musketeers, to the Right and Left outwards. 3. Pikes, to the Right and Left inwards. 4. March, interchanging Ground. Upon the interchange of Ground, by the Pikes and Musketeers, the first Rank of Pikes must pass before the first Rank of Musketeers; and it is ever to be noted, That after Command for moving of any kind, no Man stir till the Word, March, be uttered, so that they may move jointly, and not break the Order.

The Ground being changed, the Souldiers must forbear to face to their Leaders, till they be so Commanded; which done, they are in Battalia at close Order in File; and the Officers in this case, must have a regard to the whole, as not limited to their particular Companies, and the Commandent must take notice how many Serjeants are present; and if the Battalion contain 8 or 10 Companies, or a bigger number, and every Company 2 Serjeants, and 3 Corporals designed to do the duty of Serjeants, 2 must necessarily be placed on each Rank, to the Right and Left, and the others must have their Stations in the Rear; but if the Serjeants be not so many, then there will be allowed but one to each Rank, to the Right and Left, and the rest in the Rear, making a Parallel Rank to the Souldiers, keeping 3 paces distance from the Rank.

The Serjeants thus placed, the Drums must stand one half on the Right, and the other half on the Left, that they may range directly with the first Rank of the Souldiers; but if the Drums be more than usual, and the Ground be strait, then they may be disposed in two Ranks, on the Right and Left, ranging with the two first Ranks of Souldiers, ever slinging their Drums, unless contrary Command be given. The *Hoit-boys*, if there be any, are to take the right of the Drums, which are on the right of the Battalion, ranging with them in the same Ranks. on

The Commission-Officers, according to the English Military Discipline, are to take their places at the Head of the Battalion, as the Colours are drawn; but more of this hereafter. In this close Order, the Ranks, by the care of the Serjeants, are to have 12 large Feet distance between Rank and Rank, which must be kept very even, the Chief Commandent to place himself about forty paces distant from the Centre of the Pikes.

As to the Words of Command, they must be given with deliberation, lest Commanding too fast put the Souldiers beside their Exercise; Silence being Commanded, the next Word of Command is,

*Files, open to the Right, (or to the Left) to your Order. March.*

At these Words each Souldier turns to the hand mentioned, and after a short stand, the Flanking Serjeants lead the Ranks, ( which by  
this



this means are Files ) marching slowly forward by short steps ; the Serjeants with advanced Halberts, the Iron uppermost ; every Man, if they move to the Right, observing the left-hand Man, if to the Left, the contrary, and as soon as the last Man but one of the first Rank stirs, the Command is to be given for them all to Halt. And in proceeding to open Files after this manner, no man ought to move till his Leader be at four Foot distance, and then to move with equal pace, and keep the distance ; so that when faced to the proper Front, there will be three Foot space between them : The Word of Command to *Halt* given, the Word of Command succeeding is,

To your Leader.

In this case, the Captains and Lieutenants are to carry their Pikes comported, ever when they move to the Right, or Left ; the Ensigns being advanced, the Ranks must also be kept even at twelve Feet distance, which is the Serjeants Care ; the Files must likewise be at three Feet distance, each having regard to his right and left-hand Man.

To draw the Officers from the Front of the Battalion to the Rear ; these words must be used, *viz.*

Have a care of the Exercise.

Upon this, the Musketeers are to draw off their right-hand Gloves, and stick them in their Girdles. The next Words are, *viz.*

Officers, take your Posts of Exercise in the Rear. March. Upon



Upon this, the Officers must face to the right-about, the Captains marching a pretty swift pace in the one Rank, and the Lieutenants and Colours in another, two paces behind; Captains and Lieutenants, carrying their Pikes Advanced; being in the Rear, the Lieutenants and Ensigns are to take their places in a Rank, twelve Feet from the Serjeants, the Captains thirteen paces from the last Rank of Souldiers, and the Lieutenants and Colours eleven; and at this Word of Command, or further signal from the Officers, to take their Posts of Exercise in the Rear, six Serjeants of the Rear must march thorough the Intervals of the Files, posting themselves in the Front forty-six paces from the first Rank of Souldiers, being advanced six paces before the Chief Commandent, making by their ranging, a Parallel Line with the Battalion, keeping the Front free, and undisturbed. This Word being likewise given, the Pike-men must joyn their left-hands with their Pikes, placing them even with their Shoulder.

We suppose the Musketeers to have Shouldered, and the Pikes Advanced, none are to speak after Silence is Commanded, but the Officer in Chief, who thus proceeds:

1. Order your Pikes. 2. To the Right, to the Right, to the Right, to the Right-about, as you were; To the Left, to the Left, to the Left, to the Left-about, as you were.

*Words of Command for the Exercise of  
the Fire-Lock, and Pike.*

1. **M**usketeers, have a care of the Exercise,  
and carry your Arms well. 2. Lay  
your right hands on your Muskets. 3. Poise  
your Muskets. 4. Rest your Muskets. 5. Cock  
your Muskets. 6. Guard your Muskets. 7. Pre-  
sent. 8. Fire. 9. Recover your Arms. 10. Half  
bend your Muskets. 11. Clean your Pans.  
12. Handle your Primers. 13. Prime.  
14. Shut your Pans. 15. Blow off your loose  
Coins. 16. Cast about to Charge. 17. Handle  
your Chargers. 18. Open them with your  
Teeth. 19. Charge with Powder. 20. Draw  
forth your Scowpers. 21. Shorten them to an  
Inch. 22. Charge with Bullet. 23. Ram  
down Powder and Ball. 24. Withdraw your  
Scowpers. 25. Shorten them to a handful.  
26. Return your Scowpers. 27. Poise your  
Muskets. 28. Shoulder your Muskets. 29. Or-  
der your Muskets. 30. Pike-men, take heed.  
31. Advance your Pikes, to the Front, Charge.  
32. To the Right, Charge. 33. To the Right,  
Charge. 34. To the Right, Charge. 35. To  
the Right, Charge. 36. To the Right-about,  
Charge. 37. As you were, Charge. 38. To  
the Left, Charge. 39. To the Left, Charge.  
40. To the Left, Charge. 41. To the Left,  
Charge. 42. To the Left-about, Charge.  
43. As

43. As you were, Charge. 44. Advance your Pikes. 45. Shoulder your Pikes. 46. Charge to the Front. 47. As you were, Charge to the Right, as you were. 48. Charge to the Right-about. 49. As you were, Charge to the Left, as you were. 50. Charge to the Left-about. 51. As you were. 52. Port. 53. Comport. 54. Charge to the Front. 55. Trail your Pike. 56. Charge as you were. 57. Advance your Pikes.

When you Exercise thus, it must be done altogether, and not one after another, that a whole Battalion may seem to do but one and the same Action. Then to proceed, *viz.* Musketeers, take heed, Poile your Muskets. Shoulder your Muskets. Musketeers, make Ready; at what time all the Postures of the Musket are to be performed by the Musketeers together; which readiness imployes a Cocking, which must be guarded with the Thumb, lest it should go off unseasonably, and the Muskets brought strait before them, with the left hand a little above the Chin. The Pike-men at the Word, Make Ready, are likewise to bear their Pikes strait before them, and recover their left hands the height of their Ears, both of them observing, when they come to this Posture, to recover their Arms before them, that they bring their right Heels to their left Insteps; and when the Pikes Charge, and the Musketeers rest, to retire; or fall back with the right Feet in a direct Line, observing in all Chargings,

Chargings, or Motions of the Pikes, or Muskets, to take care that they clatter not one against another.

*An Explanation of the Words of Command, or Postures, in Exercising the Fire-Lock Musket, and how they must be performed.*

**W**hen you enter upon Exercise, whether it be of Pike or Musket, you must observe to keep your Feet at a moderate distance, that you may, upon occasion, retain your full Force, ever keeping the left Heel firm, and set the right Feet: But as to the Exercise,

1. Lay your right hand on your Musket.

In this Action, the Lock being uppermost, turn your Barrel towards you, and your Fingers being extended, lay your right hand just behind the Lock, then close the Butt end of your Musket to your Shoulder, so that it may in all parts be of an equal height.

2. Poise your Musket.

Here you must hold it with a hard grasp, facing to the Right, and turning with a quick motion upon your left Heel, keeping your Musket before you, the height of it between your Shoulders, your right Elbow on your side, and your Feet at a moderate distance, that turning about, the point of your left Toe may be

to the Front, and that of your right, as you face to the left Heel, being directly against the middle of your right Foot; and so are you in a resting Posture, &c.

3. Rest your Musket.

In performing this, let your Musket slide down to your left hand, letting down your Arm as low as possible, without stooping, receiving the Musket directly where the Scowrer enters into the Stock, suffering your hand to touch no part of the Barrel; let it be a little stooping about half a Foot from your side, keeping your right hand with your fingers extended behind the Lock.

4. Cock your Musket.

In this doing, place the Thumb of your right hand, and your Finger behind the Trigger, and clapping it against your Thigh, Cock, keeping, for the better security, your Thumb upon the Cock.

5. Guard your Musket.

In Guarding your Musket, bring it in the foregoing Posture with a very quick motion strait before you, to the Recover, your left hand equal with your Mouth, but about half a Foot distance, not stooping, nor suffering your Musket to sink, observing in bringing up the Musket, before which is a Recovering, to make the right Heel come to the left Instep, keeping your Musket right perpendicular.

## 6. Present.

In this case, fall back with your right Leg, so that the left Heel be against the middle of the right Foot, suffering the Butt end to rise to your Shoulder, setting it fast, your right Elbow even with the height of the Peice, being ever ready to pull the Trigger with the fourth Finger of your right hand, bending the left Knee a little, and keeping the right very steady, levelling breast high.

## 7. Fire.

Here you must keep true motion in drawing the Trigger, doing it all together, so that the Fire of a Battalion may give but one Report, or appear to be no more than one Flash, the body steady, and the Musket close to the Shoulder, till the next Word of Command, which is,

## 8. Recover your Arms.

Hereupon suffer the Butt end of your Musket to sink in both hands, till it be perpendicular, the right under the Cock, and the left as high as your Mouth, always upon a Recovery, bringing it before you upon a very quick motion, turning the right Heel, so that that it may come up with the left Instep.

## 9. Half bend your Musket.

With your right Leg fall back, let the Muskets rest at once, the right Thumbs being upon their Cocks, and the right Fingers behind



behind their Triggers ; then closing to the Thighs, half bend, with your right hands placed behind the Lock, keeping them rested with Fingers extended.

10. Clean your Pan.

This you may do by pressing the Ball of your Thumb into the Pan, holding the right hand behind the Lock, that the posture may the better appear.

11. Handle your Primer.

In doing this, take the little end between your Thumb and Finger, turning the great end to the back of your Hand, your Arm bearing backward.

12. Prime.

Upon Priming, level your Piece exactly upon a Line, and having Powder a little bruised, strike it into the Pan as much as is convenient, the left Toe being kept upon the Front.

13. Shut your Pan.

Here use your two first Fingers, casting your Primer back, and drawing up your right Heel to your left Instep, your Musket strait up before you Recover, with the Battel towards you, done with a quick Motion, the Thumb of your right hand on the top of the Steel, and the left hand as high as your Mouth.



## 14. Blow off your loose Corns.

In this case, bring your Pan within four Inches of your Mouth, and blow with a strong blast, observing to do it altogether, standing upright without declining the Head, casting out your Arms, and suffering your Piece to sink from the posture it before was in.

## 15. Cast about to charge.

In doing this, let your right Leg advance, turning the Barrel of your Musket downwards, bringing it to your left side somewhat backward in your left hand, suffering none of your fingers to touch the Barrel, the Toe of the right Foot being directly to the Front, the right Heel over against the middle of the left Foot, the Musket ballanced in the left hand, the Muzzle to a proper Front of an equal height, half a foot from your Body, your right hand joyned to the Muzzle of the Musket, and your Thumb extended to the side of the Barrel.

## 16. Handle your Charger.

This must be done with a full gripe, holding it even with the Muzzle of the Musket underneath, about an Inch from it.

## 17. Open it with your Teeth.

Here bring it up to your Mouth without bowing your head; then bring the Charger within an Inch of your Muzzle underneath, covering the Charger's Mouth with the Ball of your Thumb.

## 18. Charge with Powder.

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Having put the Powder with a quick motion into the Barrel, hold the Charger underneath, as before.

19. Draw forth your Scowrer.

Upon this word, let fall your Charger, and by turning your hand, draw your Scowrer, or Gun-stick, at three motions, holding it level the height of your Forehead, your Arm extended, as if you were about to dart it.

20. Shorten it to an Inch.

In this case, turning the great end of your Scowrer towards you, let it sink till within an Inch of the end, resting it against your Body somewhat below your right Breast, stopping.

21. Charge with Bullets.

Having a Bullet in your Mouth, take it out with your right hand, and put it into the Barrel, placing the great end of your Scowrer just at the Muzzle of your Musket.

22. Ram down Powder and Ball.

Take a full grasp with your Thumb and Fore-finger, from the Muzzle, your Thumb on the top of the Scowrer, keeping a handfull in your hand.

23. Withdraw your Scowrer.

Your Hand, Thumb, and Fore-finger being turned towards the Muzzle, clear your Scowrer at three motions, and dart it as before.

24. Shorten it to a Handful.

Clap the small end of your Scowrer to your Breast slip it to a Handfull, holding it a little

tle below your right Breast, sloping.

25. Return your Scowrer.

Upon this, place it in its proper place, without expecting any word, grasp the Muzzle of your Musket with the right hand, your Thumb being extended upon the Scowrer, keeping it half a Foot clear from your Side, the Muzzles directly to front all of a height.

26. Poise your Musket.

In this, with your left hand before you, bring up your Musket, grasp it with your right under the Cock, falling with your right Leg to your left, keeping it Poised before your Nose, being faced to the Front, let your right Elbow rest upon your Body.

27. Shoulder your Muskets.

In this, take the rule that has been mentioned.

28. Poise your Muskets.

Do this as before shew'd.

29. Order your Muskets.

In doing this, sink your right hand a little, take hold of the Stock with the left hand on the top of the Scowrer; then suffering the left to sink, take hold of the Muzzle with the right hand, the butt end easily sinking near the ground, when after a little pause let them all come down together; then close to the right foot, place the butt end about the middle of it, the Lock outward, and your right hand an Inch below the Muzzle.

30. Lay down your Musket.

Having turn'd it with the back upwards, you step forwards with your left Leg, and with your right hand lay it on the ground, that it may lie in a straight Line with the rest, never laying it down with any other but the right hand.

31. *Quit your Musket.*

Stand upright, by raising your self with a fall back of your left Leg to your right.

32. *Handle your Musket.*

Here to step forward with your left Leg, and lay your right hand on the Muzzle.

33. *Order your Musket.*

Upon this word, raise the Muzzle, and fall back with your left Leg to your right, turning the Lock outwards by the middle of your foot: And thus, in case of Fire Arms, the postures are little different, as will hereafter appear.

*Instructions for Exercising the Pike, relating to the various Postures already mentioned in Command.*

1. *Pike men take heed.*

*Advance your Pikes.*

**I**N this case, move your Pike upward in a direct Line, with your right hand near your side, your right hand well near as high

as you can reach, depressing your left hand as low as you can, your fingers strait out, and raise your Pike till the butt end comes to your right hand, at what time, place it between your Breast and Shoulder, keeping your butt end close, that it may be more firmly upright.

2. **To the Front.**

Place your left hand on your Pike even with the top of your Shoulder, casting your finger strait, bringing your Pike right before you with a very swift motion, drawing in your right Heel to your right Instep, keeping the Pike strait.

3. **Charge.**

In this posture fall back with your right Leg, suffering the heel of your left foot to be against the middle of your right, and bring down your Pike with a quick jerk, support your Pike with your left elbow, and charge breast high, bending your left Knee upon yielding your Body forward to fix your self the firmer, holding the butt end in the palm of your right hand, your left Toe directly pointing with the spear of your Pike, set your Feet at a moderate distance, to stand the more firm, and bring your Pike down a little beneath your breast, beware of clattering, close it to your breast when it is Charged.

4. **To the Right, four times.**

In this doing, turn your left Toe to the

light, then make your left heel come up with your left Instep with a quick motion, recovering your Pike strait before you, then having turned, fall back with your right Leg, Charge, as before &c.

5. To the right about.

Here you must, by turning your left Toe, bring it to the Right about, bringing up your right Heel, your Pike recovered, then Charge, being turned with much quickness.

6. As you were.

Bring up your left Toe by turning to the Left about, then bringing your Pike recovered, your left hand must never be higher than your Mouth, your Feet in Order; when being turn'd, you must fall back with your right Leg and charge, bringing your Pike straight up without Clattering.

7. To the Left, 4 times.

8. To the Left about.

9. As you were.

10. Advance your Pike.

} Do these as has  
been shewn in case  
of the Right only,  
observing 8 left  
Motions, &c.

In doing this, make your right Heel come up to your left Instep, having your Pike before you, fall out with your right Foot, and bring your Pike to your right Thigh.

11. Shoulder.

Your fingers of your left hand being extended, lay that hand on your Pike even with your



your Shoulders then, make your right Heel come even with your left. Inſtep, your Pike right before your, fall back with your right Leg, and put back your right Arm as far as may be, holding your Pike about half a foot from your ſide, keeping your Eye upon the Spear, directly to the Rear, your Pike floped; when forſaking it with your left hand, bring in your right Leg, laying your Pike on your right Shoulder, keeping your Elbow to your Body, the butt end half a foot from the ground in the middle of the diſtance,

### 12. Charge to the Front.

Here you muſt fall back with your right Leg, putting back as much as may be your Arm, keeping the Spear exactly to the Rear, ſetting the Pike aſlope at the ſame height as ſhouldering, then bring the butt end backwards with your left hand, turning the head with your right hand, then quit it with that hand, and take hold of the butt end, and Charge breſt high, the palm of your hand againſt the butt end open, and your left Elbow under the Pike, the left Toe directly with the Spear, and when you Charge, let it be directly forward, your left Heel being juſt againſt the middle of your right Foot.

### 13. Shoulder as you were,

In the firſt place, raiſe your Pike with both your hands, then quit it with the right, and with the left, turn the head backwards, the



Spear directly with the Rear; then seize it again with your right hand as high as you can reach without straining, and stand with it from your Body aslope, bring up your right Leg, and forsaking your Pike with your left hand, lay it on your Shoulder, always keeping the Spear in a direct point to the Rear, not any ways crossing others.

#### 14. Charge to the Right.

Here you must fall back with your right Arm and Leg, keep the Spear in the Rear, sloped at the height of Shouldering, turning your left Toe to the right; let the right fall behind the left, that the middle of your right Foot may be over against your left Heel, and in this Action bring your Pike up, and turn backwards the butt end by your right side, then pressing it in the palm of your right hand, Charge.

#### 15. Shoulder, as you were.

Make your left Toe come to the left, and the middle of your right Foot against your left Heel, with your Pike up, then turn the head of it to the right, viz. directly to the Rear, doing it at one motion, then with your right hand rake hold of your Pike, so with both hands keep it a little distance from your Body stop'd, as when you Shoulder; then bring your right Leg up, and lay your Pike on your Shoulder.

## 16. Charge to the Right-about.

Here you must with your Hand and Leg give back, and stand with your Pike a little distance from your side, turn your left Toe to the Right-about, bringing the butt end of your Pike to the right side, falling back with your right Leg, Charge, keeping the Spear of your Pike all the while to the Rear a Shouldering height, being careful not to mount the Spear of your Pike higher or lower; and when you are to face to the Right-about, level your Pike, and Charge.

## 17. As you were.

Upon this Word of Command, turn your left Toe to the Left-about, causing your right Foot to advance a moderate Step, so that the middle of it be placed against your left Heel, bring the butt end with your left hand by your left side, observing the Spear to be exactly with the Rear, the same height as in Shouldering, then as high as with ease you can reach, lay on your right hand, and stand with it in form, after which bring up your right Leg and Shoulder.

## 18. Charge to the Left

In doing this posture, fall back with your Leg and Arm, as has been shewed in the former Chargings, turn to the left Toe, and turn the butt end of your Pike with your left hand to the Right, then bring up your right Leg, and Charge.

## 19. As

19. As you were.

Here you must raise the Spear with both your hands, turning the left Toe to the Right; then fall back with your right Leg, and Arm, holding your Pike from your side, the Spear directly to the Rear, then bring up your right Leg and Shoulder.

20. Charge to the Left about.

In this case, fall back with your Leg and Arm, then bring the Pike over your Head with both your hands, keeping the Spear directly to the Rear, at the height of Shouldering, turn your left Toe to the Left about, then bring up your right Foot, so that the middle of it may come with your left Heel, and Charge.

21. Post.

Do this, as charging the Front, but be cautious that you sink not the Spear of your Pike so low, resting it instead of the Elbow between the Thumb and Fore-finger, keeping the Elbow close to your side.

22. Compote.

In this doing, bring your left hand backward as far as you may, stretching out the right, making the step forward with the right Foot, firmly grasping the Pike with the right hand as far as you can reach, not tossing the Spear too high; this done, forsake it with your left hand, bringing back your right Leg even with your Left, then close the  
Pike

Pike to your side, keeping the Spear about the height of your Head.

23. Charge to the Front.

In this, let your right Arm be extended at the same time, advancing your right Leg, putting back your left hand as far as you can, bring your Pike forward, upon which give a step back with your right Leg, take hold of the butt end with your right hand, then Charging, Charging ever breast high,

24. Fire.

Here, face to the Right about, suffering the Spear of your Pike to fall behind you, then let your right hand be quitted from the butt end, without moving the Left; take care likewise, not to strike up the Spear.

25. Charge as you were.

In this Exercise, turn your self to the Left about, take the butt end of the Pike on the palm of your right hand, and Charge, keeping your Spear at an even height.

26. Advance your Pikes.

Here observe to bring your right Heel to your left Instep, and your Pike before you, to the Recovery, then fall out with your right Foot, till it come even with your Left, and by this means bring your Pike to your right Thigh.

27. Order your Pikes.

Raise your left Hand even with the top of your Shoulder, and lay it upon your Pike, your  
Fingers

Fingers stretched out, then sink your left hand, and raise your right, and so raise the Pike, that when the butt end is on the ground, your right hand may be against your Eye, setting the butt end to the Latchet of your Shoe, and keeping the Pike near your Head; and in this Exercise suffer all the butt ends to fall to the ground together.

28. **Pikes, to your Inside Order.**

In this doing, you must fix the butt end of your Pike on the inside of your right Foot to the middle, moving only your Pike, and not your Foot.

29. **Lay down your Pikes.**

Step altogether with your right Legs, stoop altogether with a quick motion, and lay them very strait with your right hands.

30. **Quit your Pikes.**

With your left Leg fall back, bringing it even with your right, stand up all together.

31. **Handle your Pikes.**

In this doing, step forward with your left Legs, in a quick motion, stoop all together, and extending your right hands as far as you can reach, grasp your Pikes.

32. **Order your Pikes.**

Raise the Pike with your right hand; step back with your left Leg, clapping the butt end for the more easie raising about the middle of your right Foot on the inside.

33. **Pikes,**

33. *Pikes to your Out-side Order.*

To do this, place the butt end of your Pike on the outside your Foot, moving your Pike, and not your Foot.

34. *Advance.*

Do this as before. And thus have we given the Practitioner in Arms the true Postures of the Musket and Pike distinctly, which with a little use, may perfect him in that which is so necessary to be understood by the Sons of Mars; from which we proceed to give further Instructions of this kind.

*Directions for the Exercise of the Pike and Musket together, by a whole Battalion, or single Company; supposing the Pikes Advanced, and Muskets Shouldered: The word of Command given, Is,*

I. *Musketeers make Ready.*

**I**N this, they must perform all the Postures and Motions together, till such time as they stand guarded with their Muskets before them, and their Thumbs, for the better security, on the Cocks; whereupon the Pikes are to be recovered before the Pike-men, the butt ends in the palms of their hands, and the Spears upright, their left hands no more than the height of their Mouths.

When



When the word Charge is given, then must they bring down the Muskets, and Pikes at once, being sure to turn the left Toes that way they Charge, and the Heel of the same Foot directly against the middle of the right Foot in every Charge, Charging directly forward; not at first Charging, the Pikes close to one anothers Breasts, but Charge a little way distant in bringing down the Pikes; and when they are Charged, then close them.

The Charge is, To the Right four times, then, To the Right about, after that, As you were; then, To the Left, Charge four times, then, To the Left about, Charge; then, As you were; which you may observe in what has been laid down in the former Exercise.

Here the Pike-men must turn as the Musketers, bringing up their right Heels to their left Insteps, extending their Arms as they turn, bringing their Muskets strait before them, their left hand high as their Mouths, pulling back their Arms, and when they are faced, fall back with their right Legs; nor must they bring down their Arms till the Word, Charge is given, doing it with a quick motion, and not suffering the Pikes to clatter.

Then



*Then the Word of Command is; viz.*

**Recover your Arms.**

**Half bend your Muskets.**

**Poile your Muskets.**

**Shoulder your Musket.**

} As before is noted.

Hereupon, the Muskets being Shouldered, the Pikes that stood Recovered, falling out with their right Legs, the Pikes are brought to their Thighs, to their Advance.

**Poile your Muskets.**

This Command given, the Pike-men must fix their left hands to their Pikes, about the height of their Shoulders. Then

**Order your Arms.**

**Pikes, to your Inside Order.**

**Lay down your Arms.**

**Dust your Arms.**

**To the Right about.**

**March.**

These must be observed, as is before directed in the Exercise, which, to repeat again, would be Tautology ; only thus much, when you are clear of your Arms, you must disperse, and upon the beat of Drum, run thither again with a Huzza, your Swords drawn, and their Points upwards: Then these words of Command are given, viz.

**Return your Swords.**

**Handle your Arms.**

**Order**

Order your Arms.

Pikes, to your Out-side Order.

Advance.

These things ought to be duly considered; and in this first place, in ordering your Arms, observe to make a little stop, before the butt ends come to the ground, that they may fall together at once; after the Arms are laid down and quitted, you must all stand up together, as if it were but one motion.

Upon marching from your Arms, step Front and Rear together with the left Feet, and march but a little distance.

Your right hands being laid on your Swords, take hold of your Scabbards with your left, and your Swords being drawn, you must hold them upright before you, bringing them down at one motion; and when by Command you have returned your Swords, stand upright to your Arms, looking to your proper front. As for the rest, we refer you to the Exercise of the Pike, and Musket distinctly.

*Several things to be observed in Command, and Exercise, relating to the Match-Lock Musket, &c.*

THE Match-Lock Musket, in all the material parts of Exercise, is the same with the Fire-Lock; but some other things being to be observed

observed, we shall lay them down for the ease of the Reader, and this chiefly consists in keeping your Match well with a good Coal, fastning it upon Command, advantageously in your Screw, blowing the Coal, and trying your Pan by false Flashes, laying it down at Command, taking it up again, shortening it to the Pan, that it may give true Fire : But more to the particulars.

1. Lay down your Matches.

Do this at Four Motions ; First, by a little turning the butt end of your Musket, easily slipping on your Shoulder, lay then your right hand on your Match, and extend your right hand and foot before you recover your Musket in its place. Thirdly, Stoop, and bring your Match near the right Foot, within-side, suffering your Ham to bend a little. Lastly, Quit it, and bring your Body upright, and your right Foot even with your left.

2. When the Comand is given, viz.

Handle your Match ; Then having recovered it, bring it between your third and fourth Finger by the help of your Thumb and first Finger, always using your right Hand ; then the Palm being turned from you, you stretch your Arm toward your right-hand Man.

3. Blow your Match.

Here bring your Match to your Mouth, not stooping, but turning your Head a little to the right, having given a Blast to carry off

the Ashes, cast off your Arm to the right.

4. Cock, and try your Match.

In this case, fetching a compass with your Arm, bring your Match to the Cock, and supporting it with your two near Fingers, press it down with your Thumb, guiding it with your middle Finger; when keeping your middle Finger between it and the Pan, pull your Cock down as low as the Pan, and sink, or raise your Match, that it may hit the middle of the Pan, and having fired, when you hear the word, Return your Match.

Hold your Musket in your left hand, the Barrel towards you, suffering your left Elbow to rest on your Body, then take your Match between your Thumb and Finger, in the right hand, placing your Thumb on the top of it, the palm being turned from you, placing one end of your Match between the third and fourth Finger of your left hand, and the other end press with the first and second Fingers, then with extended Fingers place your right hand under the Pan.

This is all that is material as to the Match, the other postures of the Musket being the same with the Fire-Lock already mentioned.

## *Directions for the Exercise of Foot Granadiers.*

**T**Hough the Granadiers in many things differ from the Musketers in Exercise, yet for the better part they do the same, drawing up in the same Order, Rank and File, only they seldom draw up above three deep, and supposing them to be Shouldered. The Words of Command are,

Lay your right Hands on your Fire-Locks

- |                           |                                                                                                                |
|---------------------------|----------------------------------------------------------------------------------------------------------------|
| 1. Poise your Fire-Locks. | } All these are<br>to be done in<br>the same man-<br>ner as the Ex-<br>ercise of the<br>Fire-Lock Mus-<br>ket. |
| 2. Rest your Fire-Locks.  |                                                                                                                |
| 3. Cock your Fire-Locks.  |                                                                                                                |
| 4. Guard your Fire-Locks. |                                                                                                                |
| 5. Present.               |                                                                                                                |
| 6. Fire.                  |                                                                                                                |
| 7. Recover your Arms.     |                                                                                                                |

8. Cast over to the Left

} In doing this  
they are to  
lay their right  
hands on their  
Daggers.

9. Draw your Daggers.

Here they must draw their Daggers, and hold them upright in their hands before them.

10. Screw it into the Muzzle of your Fire-Lock.

Do this so, that the flat side may be towards you, when you have recovered.

11. Return your Arms.

12. Charge to the Right (four times.)

13. To the Right-about, Charge.

14. As you were.

15. To the left, Charge, (four times.)

16. To the Left-about, Charge.

17. As you were.

18. Recover your Arms.

These are to be done with a quick Motion, after the manner of the Fire-Lock Musket.

19. Cast to the Left.

Upon this, they are to seize their Daggers with their right hands.

20. Withdraw your Daggers.

Hereupon, hold them directly before you, the flat side to your Body.

21. Return your Daggers.

Upon this, put them up into the Scabbard.

22. Poise your Fire Lock.

23. Half bend your Fire-Lock.

Do these as the Musketers do the Fire-Lock.

24. Open



24. Open your Cartridge-Box, and handle your Primer.

These are easily understood, and need no direction.

25. Prime.

26. Return your Primer,

27. Shut your Pan.

28. Blow off your loose Corns.

29. Cast about to Charge.

Do all these as the Musketers.

30. Handle your Cartridge.

31. Open it with your Teeth.

32. Charge with Powder and Ball.

33. Draw forth your Screw.

34. Shorten it to an Inch.

Here, by the Cartridge is meant the Charge of Powder, made up in a Paper fit for the Piece, so that the Bullet being placed on the top of it, they may be put in together.

35. Ram down Powder and Ball.

36. Withdraw your Screw.

37. Shorten it to a handful.

38. Return your Screw.

39. Poise your Fire-Lock.

Do these as the Musketers do, according to the Instructions laid down, in their Exercise.

40. Shoulder your Fire-Lock.

Upon this Command, the Ranks are to close forward at six Foot; it being the Serjeants care to place their Halberts at a due distance.

41. Poise your Fire-Locks.

Upon this, over what the Musket requires, seize the Sling with your left hand.

42 Sling your Fire-Locks.

43. Handle your Pouches.

In handling your Pouches, let your left hands, be on the bottom, all of a height, advancing the right Legs, and the right hands being of an equal height.

44. Open your Pouches.

Do this altogether.

45. Take forth your Granado's.

Do this with the right hand extended before you.

46. Shut your Pouches.

Do this all at once.

47. Uncase your Fuzee.

Doing this, step back with the right Foot to the left, facing.

48. Handle your Hatch.

Do this with the left hand to the left side, extending your Arms, doing it nimbly altogether.

49 Blow your Hatch.

In this, the first Rank must fall back with their right Legs altogether, giving a strong Blast.

50. Fire your Fuzee.

51. Deliber your Granado.

At this last Word of Command, the second Rank must advance six foot before the first, with

with their Match ready to blow ; and when they have observed the Words of Command, the third must advance before them ; when upon the Word, **Blow your Hatch**, the first and second Ranks are to lay their hands upon their Hatchets ; and upon the Word, **Fire your Fuzes**, they are to raise their Hatchets ; and upon that of **Deliver your Granado**, the Sergeants must be careful that the first Rank stands, the second Marches six Foot before the first, and the third six Foot before the second, expecting the Word of Command with their Hatchets raised, at what time the first Rank must raise theirs likewise.

**Fall on.**

In this case, they must handle them fast, bringing them down.

**Return your Hatchets.**

Upon this you must put them into the frog of your Belt, by your side.

**Poise your Fire-Locks.**

**Shoulder your Fire-Lock.**

} Do these as  
in case of the  
Fire - Lock  
Musket.

**Granadiers, make ready.**

In this, the first Rank make ready their Fire-Locks, and the second Rank handle their Pouches, and the third their Hatchets.

**The first Rank Present.**

At this Word of Command, the second Rank must open their Pouches, take thence their Granado's, whilst the third raise their Hatchets.

**Fire.**

Upon this Word of Command, the second Rank must shut their Pouches, uncase their Fuzees, and handle their Match.

**Recover your Arms.**

Here without any further Command, the Granadiers of the first Rank must cast over to the Left, draw and screw their Daggers into the Muzzles of their Pieces, recover their Arms, and Charge; the second Rank to advance six foot before them,

**Blow your Match.**

**Fire your Fuzee.**

**Deliver your Granado.**

Upon this Command, they Poise their Fire-Locks, and make ready, whilst the third March as the second with their Hatchets.

**Fall on.**

**Recover your Arms.**

At this last, the third Rank must March twelve foot before the first Charging, the second at six, the first returning their Hatchets, and making ready their Fire-Locks.

**Recover your Arms.**

Upon this, they half bend their Fire-Locks.

**Cast**

Cast over to the Left.  
 Withdraw your Daggers.  
 Return your Daggers.  
 Poise your Fire-Lock.  
 Shoulder your Fire-Lock.  
 Face to the Right-about.  
 March.

Upon this last, 'tis the Serjeants Duty to be carefull, that forward, the Ranks open to twelve foot, and that they so continue Marching till they come to their Ground, where they must halt without any Word of Command.

As you were.  
 Poise your Fire-Locks.  
 Order your Arms.  
 Lay down your Arms.  
 Quit your Arms.  
 Face to the Right-about.  
 March.

In these, observe the Posture of the Musket.

Here observe, that when you are clear of your Arms, you are to disperse, and upon the Drum beating, you must hast to your Arms with a chearful Huzza, your Daggers drawn, listd with their Points upwards.

Return

Return your Dagger.	} Observe these   as the Exercise   of the Musket,   Fire Lock, and   the rest, as they   have been laid   down, and you   may grow ex-   pert,
Handle your Arms.	
Order your Arms.	
Boise your Fire-Locks.	
Shoulder your Fire- Locks.	

*Considerations of the Drum, so necessary in  
the Exercise of the Foot; what relates  
thereto.*

THE Drum has been very anciently used  
in War, and always approved by the  
greatest Captains; the Souldiers understand-  
ing thereby, what they are to do in many  
points, as well as by the voice of their Com-  
mander, and therefore it is called seme-vocal,  
and gives directions of sundry kinds in these  
six points of War more peculiarly distinguish-  
ed, viz.

1. The Call. 2. The Troop. 3. The March.  
4. The Preparative. 5. The Battaile. 6. Retreat.  
And of these in their Order.

1. The Call is to bring the Souldiers toge-  
ther to their Arms upon deliberate or urgent  
occasions, or to hear any Proclamation or Or-  
ders



ders that are to be given by the Officers; so the Souldiers ought not, especially in time of War, on great Penalties, to ramble beyond the hearing of it, unless they be sent upon Parties, or by some Express with the Knowledge and Approbation of the General, or Officer in Chief.

2. The *Troop* being beat, the Souldiers must incontinently shoulder their Muskets, and Advance their Pikes, closing their Ranks and Files to Order, following their Officers to the place of Randesvouze, or elsewhere.

3. The *March* beaten, you must observe to take your open Order in Rank, shoulder both Musket and Pike, and march quicker, or slower, as the Drum beats.

4. The *Preparative* is to warn you, that you close your due distance in preparing for Battle, or Skirmish, and see that nothing be out of Order that may turn to your Advantage or Hindrance; for a Battel seldom succeeds well where the Order is not observed with the greatest Exactness.

5. The *Battaile* is that which is usually called the Charge or Signal to charge the Enemy; so that upon this the Souldier must raise his Spirit to the highest pitch of Fury, though with caution; for Valour and Prudence ought to go hand in hand, if you would attain to things noble and great.

6. The *Retreat*. This is beat when at any  
time

time the Enemy is too strong, or by drawing off to better your ground, you may gain a better Advantage, or expect greater Succour; as when an Out-guard or Party finds it self over charged, it retreats to the main Body; or when on a sudden, an advanced Party espies an Ambushment.

Besides these, there are two others used, but they are not properly called Points of War, *viz.*

*The Tattoo, or Tapta, and the Revally.*

The first of these is used in a Garrison, or upon the Rounds, both to warn the Souldiers and Inhabitants, when they ought to repair to their Quarters, or Guard, and when to shut the Doors, that so if any Spies be abroad they may be the better distinguished; for when the Tapta is returned to the Body of Guards, a Warning-piece ought to be shot off, after which no person ought to be out of his Quarters, or from his Post, unless the Watchword be given him.

The *Revally* takes, as is most likely, its Denomination from the *French* word *Reveiller*, which signifies as much, as to arise up, or awake from sleep; for this is beaten in the Morning, to give notice to the People, that they may be safely abroad, at which time the Out-Centinel's are taken off.

There are of late other things signified by  
the

the Drum, as the manner of Exercise, but it being mostly according to Humour, the Drum-Majors ought to give it to every File-leader in writing, that so he may be able to direct his File by his Example, what they are to do till the Souldiers are perfect in it; and the reason why we so direct is, because it is variable, and not so substantial as the word of Command.

There are at this day in many Regiments *Hoitboys* used instead of the ancient *Flutes*, but they have no significant Sign, being only to chear and raise the Spirits of the Souldiers, that their labour may seem the less.

*The Exercise of Dragoons, or Musketiers on Horse-back.*

**I**N this, to shorten any tedious Prologue or Intricacy, we will suppose the Dragoons to be ready in the Field, drawn up in three Ranks, having advanced their Muskets, the Officers taken their Stations, and all things in a readiness for the Word of Command.

1. Dragoons have a care.
2. Sling your Muskets.
3. Make ready your Links.
4. Clear your right Foot of your Stirrop.
5. Dismount.

Here they stand ready at their Horses heads, and the six out-side Men continue mounted, that

that they may hold and guard the Horses.

6. Link your Horses to the Left.

7. March clear off your Horses, and Shoulder as you March.

8. Halt.

Upon these Words of Command, the Battalion by the care of the Officers, is to be formed as the Foot, *viz.*

1. Have a care of the Exercise.

2. Officers to the Right about.

3. Take your Posts in the Rear of the Battalion.

4. March.

In this Ordering, the Serjeants and Corporals must fall into the Flank, and Rear of the Battalion, and the Commission Officers from a Rank in the Rear.

5. Dragoons have a care.

Upon this they must pull off their Gloves off the right hand, and stick them in their Girdles.

6. Lay your right hand to your Muskets.

7. Poise your Muskets. 8. Rest your Muskets. 9. Cock and Guard. 10. Present.

11. Fire. 12. Recover your Arms with the Cock half bent. 13. Rest upon your Muskets. 14. Handle your Daggers. 15. Draw forth your Daggers. 16. Fix them in the Muzzle of your Muskets. 17. Poise your Muskets. 18. Charge to the Front. 19. To the Right, Charge, (four times.) 20. To the Right about, Charge. 21. To the Left

Left about, Charge. 22. To the Left, Charge  
 (four times) 23. To the Left about, Charge.  
 24. To the right about, Charge. 25. Re-  
 cover your Arms. 26. Rest upon your Mus-  
 kets. 27. Handle your Daggers. 28. With-  
 draw your Daggers. 29. Place your Dag-  
 gers. 30. Poise your Muskets. 31. Rest  
 your Muskets. 32. Clean your Pans. 33.  
 Open your Cartridge-Box. 34. Handle your  
 Primer. 35. Sink and Prime. 36. Return your  
 Primer. 37. Shut your Pan with your Fore-  
 fingers. 38. Blow off your loose Corns;  
 At which time you must recover your Arms.  
 39. Cast about to Charge. 40. Handle your  
 Cartridge. 41. Take out your Cartridge;  
 which done, you must presently shut the Box.  
 42. Open them with your Teeth. 43. Charge  
 with Powder and Ball. 44. Draw forth your  
 Scowlers. 55. Shorten them to an Inch.  
 This must be done against your Breast. 46.  
 Put it into the Muzzle of your Musket. 47.  
 Ram down Powder and Ball. 48. With-  
 draw your Scowler. 49. Shorten it to an  
 Inch, as before. 50. Place your Scowler.  
 51. Poise your Muskets. 52. Shoulder your  
 Muskets. 53. Poise your Musket. 54. Rest  
 your Musket. 55. Lay down your Arms.  
 56. Quit your Arms. 57. To the Right-  
 about. 58. March clear off your Arms and  
 break: Being marched clear off the Arms,  
 they must offer, as if they dispersed; but  
 upon

upon the first beat of Drum, they must swiftly return with a Huzza, every one drawing (in that Motion) his Sword; then each must stand over his own Arms, to expect further Command, viz 59. Return your Swords. 60. Handle your Arms. 61. Rest upon your Arms. 62. Poise your Muskets. 63. Sling your Muskets. 64. To the Right about. 65. March to your Horses. 66. Unlink your Horses. 67. Shorten your Buidles. 68. Put your left Foot in your Stirrup. 69. Mount. 70. Fasten your Links. 71. Unslung and Advance your Muskets.

Though this Exercise is for the most part like the Exercise of the Fire-Lock Musket, on Foot, whether to know any thing difficult we refer you, yet these are many times obliged to fight on Horse-back, as being appointed, and necessary, for the succour, either of Horse or Foot, as Occasion or Advantage offers; therefore it will be requisite to speak something of their firing on Horse-back.

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*The Exercise of Dragoons on Horse-back,  
as to their Firing, &c.*

THE Dragoons having advanced their Muskets on their right Thigh must expect the Words of Command, viz.

1. Join



1. Joyn your left hand to your Musket.
2. Cock and Guard.
3. Rest your Muskets on your Biddle hand.
4. Present.
5. Fire.
6. Recover your Arms, with the Cock half bent.

This being observed, they are in a posture to March, Wheel, or Face, as shall be Com-manded, or seen most Expedient.

These Dragoons were at first entertained for swift Marches, passing deep Ways or Waters, to keep equal pace with the Horse, till the Foot at more leasure could come up ; but being since found very necessary to defend against the shot of the Musketers, they have been continued, and are no more than a kind of Musketers on Horse-back.

*Granadiers on Horseback, what their Exercise is, and how to perform it with Dexterity, &c.*

THESE, as the Dragoons, often fight on Foot, and therefore, though, when they are on Horse-back, they may be exercised as the Horse ; yet it is most convenient whenever they March, Wheel, Face, or Halt, that they do not bear up too close, nor do it in thick Files, but between every File leave three foot distance, the easier to dismount, and March  
D clear

clear off their Horses, or Face about as occasion shall require; when in this manner being marched into their Arms, loaden, Hats on, and the word to Halt given, the Commanding Officer having bid Silence, must thus proceed, *viz.*

1. Grenadiers have a care.
2. Sling your Muskets. In this doing, have your left hand upon your Sling
3. Put on your Caps.
4. Right and Left-hand Men of each Rank, kap Mounted.
5. Clear your right Foot of the Stirrop. In this case they must handle their Muskets, casting them backwards.
6. Dismount. This must be done altogether with a quick Motion.
7. Make ready your Links.
8. Link your Horses to the Left.
9. March clear off your Horses. This may be done by a third or second Rank, Marching through as soon as clear, handling at the same time their Muskets.
10. Halt.
11. Lay your right hands on your Muskets.
12. Poise your Muskets, facing to the Right.
13. Rest your Muskets.
14. Cock and Guard.
15. Present.
16. Fire.
17. Recover your Arms. Here you must have your Muskets half bent.
18. Cast about to the left.
19. Draw your Daggers.
20. Fix them in your Muskets.
21. Recover your Arms.
22. Charge to the Front.
23. To the Right, Charge (four times.)
24. To the Right-about, Charge
25. As you were.
26. to the Left, Charge.

Charge (four times.) 27. To the Left about  
 28. As you were. 29. Recover your Arms.  
 30. Cast about to the Left: Hold: on this  
 word of Command lay your right hands on  
 your Daggers 31. Withdraw your Daggers. 32.  
 Return your Daggers. 33. Poise you Mus-  
 kets. 34. Clean your Pan 35. Open your  
 Cartridge Box. 36. Take out your Primer.  
 37. Prime. 38. Return your Primer. 39.  
 Shut your Pan. In doing this, bring your  
 Piece up quick before you. 40. Blow off  
 your loose Coyns. 41. Cast about to Charge.  
 42. Take out your Cartridge, immediately  
 shutting the Boxes. 43. Uncap your Car-  
 tridge with your Teeth. 44. Load with Pow-  
 der and Ball. 45. Draw forth your Scow-  
 er. 46. Shorten it to an Inch. 47. Place  
 it in the Barrel. 48. Ram home Powder  
 and Ball. 49. Withdraw your Scow-  
 er. 50. Shorten it to a handful. 51. Return  
 your Scow-erer. 52. Poise your Musket,  
 (Do this before you.) 53. Shoulder your Mus-  
 kets. Upon this word, seize the Slings with  
 your left hands. 54. Sling your Muskets 55.  
 Handle your Pouches; the same with the Foot  
 Granadiers. 56. Open your Pouches. 57.  
 Take forth your Granadoe. In doing this,  
 extend your right hand before you. 58. Shut  
 your Pouches. Do this, that it may appear but  
 one Motion, the left hands being held up all  
 at a height. 59. Uncase your Fuzee. In do-  
 ing

ing this, you must face to the Front, having fallen back with your right Leg, bringing it even with the Left. 60. Handle your Hatch. 61. Blow your Hatch. 62. The first Rank, Fire your Fuzee. 63. Deliber your Granadoe: Upon this Delivery, unslung your Muskets

At this Command, the second Rank must advance through the Right, having their Match in Order, ready to blow, and place themselves six Foot before the Rank.

64. Blow your Hatch. 65. Fire your Fuzee. 66. Deliber your Granadoe. Upon this, your Musket being unslung, you must stand ready Cock'd and Guarded; then the third Rank is to March on the Right, six Foot Forward of the second. 67. Blow your Hatch. 68. Fire your Fuzee. 69. Deliber your Granadoe. This done, unslung, and stand Cock'd and Guarded; and upon this Command, the first, or proper Front must speedily March through at six Foot distance. 70. First Rank, Fire. After this Word, the first Rank must fix their Daggers in the Muzzles of their Muskets, and the second and third must imitate the first successively, as the same Words of Command come to their turn. 71. Recover your Arms. 72. Cast about to the Left. 73. Withdraw your Daggers. 74. Poise your Muskets; doing it to the proper Front. 75. Shoulder your Muskets. 76. To the Right about. In this doing, take up your first Ground  
in

in your March, opening your Ranks. 77. To your Leader. 78. Poise your Muskets. 79. Rest upon your Arms. 80. Lay down your Arms. 81. To the Right about. 82. March. In Marching, the Ranks must be broken in manner of dispersing, then upon beat of Drum, you must draw your Swords, Face about, Recover your Order, and return to your Arms with a Huzza. 83. Return your Swords. 84. Handle your Arms. 85. Recover, and Poise. 86. Shoulder your Muskets. 87. Poise your Muskets. 88. Face to the Right about. 89. Sling your Muskets. 90. March your Horses.

In this last Performance, the second and third Ranks must March, and standing at their Horses Heads, Face to the Front.

91. Unlink your Horses. 92. Fasten your Links. When this is done, you must shorten your Bridles. 93. Put your Feet in the Stirrups. Here you must lay your Muskets over your Saddles. 94. Mount your Horses. This must be done altogether, as if it were but one Motion, and the Officers, whose Business it is, are to see the Ranks compleated in good Order. 95. Handle your Swords. 96. Draw your Swords. 97. Place your Swords. Here you must put your Sword into your Bridle-hand. 98. Handle your Pistol, which must be ever the Left. 99. Draw your Pistol. 100. Cock your Pistol. Here you must keep the

Cock guarded with your Thumb. 101. Present In this doing, bear up your Hand even with the Cock. 102. Fire. Here you must observe not to take down your Pistol, till the next Word of Command, which is, 103. Return your Pistol ; and the same Order must be observed upon drawing the right Pistol, till you return it, &c. 104. Handle your Muskets. 105. Unslung your Muskets. 106. Mount your Muskets.

If you are to Charge on Horse-back with the Musket, which is not done but upon great occasion, the Piece being Charged, the Words of Command are, viz.

1. Cock your Muskets. 2. Present your Muskets. 3. Give Fire. In this doing, you must keep your Musket in its posture, till the next Word of Command, viz. 4. Sling your Muskets. 5. Handle your Swords. Do it by taking your Swords in your right Hands. 6. March. In Marching, the Officers Commanding, may bring them to any moving posture, as Wheeling, Facing, &c. by giving his Words of Command with such deliberation, that those who are more peculiar to take Notice, may see each Individual Party perform his Exercise, and that they manage their Horses as they ought.

These Instructions put in practice, may greatly forward the young Souldier ; though, indeed, a heedfull practice is the Life of Exercise.

*The*



*The Exercise of Horse, so properly called.*

**T**HOUGH, as to the Words of Command in Exercise, they are not many, yet various are the Actions to be performed by them, as after we have given an Account of the known Words of Command shall be shew'd at large, and in this case, when a Squadron or Troop is appointed to Exercise, having their Carbines, and Pistols Loaden; the Corporals must pass through the Ranks, and see that they are all ready; which done, the Chief Officer Commands Silence, and gives the Words, viz.

Lay your right hands on your Swords.

Draw your Swords.

Put your Swords in your Biddle-hands.

Lay your hands on your Pistols.

Cock your Pistols.

Hold up your hands.

Give Fire.

When you have given Fire, you must not let your Pistol-hand fall, till the next Word of Command be given, viz.

Return your Pistols.

And this you must observe, in Fireing the right and left again.

Lay your hands on your Carbines.

Advance your Carbines.

Cock your Carbines:

Fire.

Let fall your Carbines.

Take your Swords from your Biddle-hands.

Return your Swords.

These Notions mast be exactly observed, every Man doing each particular Motion at one and the same time ; the Word of Command for that purpose, being given deliberately that there may be no mistake.

In drawing up a Body of Horse, that is, when the Body is drawn up, the Officers that Command not in Chief, ought to keep close to their Men ; but the Chief Commandent must be about a Horse's length before them, to see more exactly what is done ; and so it must be observed in Marching.

It is further to be noted at this day, that when a Squadron of Horse is to Wheel ; if to to the Right, the right-hand Men must not close to the Left, as formerly, for that puts the Rank many times out of Order, but they must keep their Ground, suffering the left to come about, whilst they only turn their Horses Heads, observing their left hand Men.

This may serve for the Motions, which the Officers are to take care of ; yet there remains many other curious Matters, to which we proceed.

*To Close the Files.*

1. If you would be at close Files. To close your Files, The right Wing File stand. Close your Files. To the Right. To the Left. As you were. To the left Wing, and stand. To the Left, by Files, close the Squadron. To the Right. As you were. The right and left Wing Files stand, By half Ranks, close Files to the right and left; or by closing Files, you may cleave the Squadron.

*The manner of Closing the Ranks.*

File-Leaders stand. By Ranks, close the Squadron to the Front. On the Front, as you were; or open to the Ranks on the Front to the first distances.

*The manner of Doubling Ranks.*

By half Files, to the Right, Double your Ranks to the Front.

File-Leaders, Advance your Rank. Half Files, take your Ground. In this manner you may Command to the Left.

The first half Files stand. By half File, Leaders on the Left Wing, double your Ranks to the Front.

Now, if you would reduce this again, observe the following Command, viz.

Right

Right Wing half Rank, Advance your Ranks. Half File Leader, take your Ground. The first half File stand. By half File Leaders on the right and left Wings; then double your Ranks to the Front, Carocolling to the right and left; then the last half File stand, and the first half File by Carocol to the right and left on the Wings; after this double your Ranks to the Rear.

Here the first half File must open the half Rank to the Right and Left. The first half File by Carocol. To the Right and Left, double your Ranks to the Rear.

In this case, let the last half File open the half Rank to the Right and Left; and since the Words Carocol and Conversion may appear difficult to understand, it will be convenient to explain the Motion.

When you are to Wheel by Carocol, observe that it is made by the depth or flank of the Squadron, by which means the Rank, and not the File makes the Motion.

Conversion in Wheeling is performed by the Front of the Squadron, by which means the File remains, whilst the Rank makes the Motion.

*Directions*

*Directions for Wheeling by Conversion,  
with the Word of Command.*

**W**Hen we say to the Right, by Conversion, it is to be understood, That you ought to close your right Leg to the Horse, your Knee touching that of the right-hand Man's; and so you must do in the Word of Command, to the Left; as when we say, Close the left Wing, then must the left Leg be closed.

By half Ranks, and by Conversion, divide the Squadrons into two Troops.

In case you would reduce the Squadron, The Command is,

By Conversion, the Squadron into one Troop, or the left Wing, Advance by Conversion

In Wheeling by Carocol, the Words of Command are, *viz.*

The right Wing to the left by Carocol, Face about to the Rear: Or, it may be performed by half Ranks, *viz.*

By Quarter Ranks, and by Carocol divide the Squadron into three Troops. Then if you would reduce them, order Quarter Ranks and Squadrons into one Troop.

If

If you are Commanded, the Volt, Face, or Facing about, observe it in this manner.

Face about to the Right, Face to the Right by Controversion, Face about to the Right by Carocol, Face about to the Left by half File, Face about to the Right and Left.

*In case in Hay you are to be drawn up, observe this Order.*

By half Ranks, to the Right and Left draw up in Hay, to the Front; and if to be reduced again, the Proceeding is thus, By Carocol, To the Right and Left. As you were. By half Ranks, and by Carocol, to the Right and Left. Draw up in Hay to the Rear. Reduction, here the Command is, To the Front. As you were. By half Ranks, to the Right and Left, draw up in Hay. Reduction, By Carocol, to the Right and Left. As you were. By Carocol, to the Right, draw up in Hay. Reduction, By Carocol, to the Left. As you were.

*The Order of causing Horses to File off.*

File by Ranks on the right Wing, on the left Wing from the Squadron. File off by Ranks on the left Wing. Form the Squadron on the Right. File off by three Files on the left Wing from the Squadron. Some, indeed,

deed, are for Filing off with whole Ranks; but the most Experience in this matter have found it most convenient to be done by Files, because three Files make a Squadron, which a Rank do's not.

The next material thing to be considered is, The Doublings, being useful for the strengthening any part of the Battel, as it shall be seen necessary, or required, consisting in these following Heads. As to the General.

1. Doublings of Length. } Front and Rear.
2. Doublings of Depth. } Both Flank.

But if you come to particulars, there are six sorts of Doublings; as thus,

First, Of Ranks; that is, when every Rank doubles into the odd, and if it happen that the odd Ranks are to double, then let the Body face to the Rear, and you need not expect any other Words of Command.

2. Half Files. } Here they are said to
3. Bingers up. } be doubled, at what time
- } they double their Rear in-
- } to the Front.

4. In doubling the Rear, it must be done when the half Files double to the Rear.

5. Observe, that the doubling of half Ranks must be by the one Rank doubling the other,  
and



and every doubling is done by the passing thro' by Counter-marches entire, or divisional doublings : And observe in the doubling of Ranks, that they are reduced by the doubling of Files ; further noting, that the doubling Files to any hand, by the doubling of Ranks to any hand, they are reduced.

In every Motion 'tis to be observed, that those who are to double, must, before they quit their places, Advance and Poise their Arms ; and the Commands being performed, they are to conform to the same posture as they observe those to be in, to whom they double, whatsoever the Posture be.

If you go upon entire Doublings, they are to be performed by Order, as well in Rank as File, and in Divisional Doublings, must be at open Order, as well in Rank, as File, observing your right-hand Man in all Motions.

If your purpose be to strengthen a Battalion in the Front, Rear, or Flanks, by Doublings, it may be done as to the Front and Rear by entire Doublings, entire Wheelings, Divisional Doublings, and Divisional Wheelings ; and in the Flanks by Files, half Ranks, and Divisional Wheelings.

In this case, the Words of Command are, Ranks to the Right, Double, March. Ranks, as you were, March. Ranks, to the Left. Double, March. Ranks, as you were, March. Observing in these Matters a general Rule,  
That

That upon any doubling of Ranks, or half Files, notwithstanding their turning to the contrary hand, they double on from the ground they double to. They (when they come to their own ground) must ever turn to the hand they double; and thereby they stand directly after their Leaders.

If you are for doubling of Files, that may be done in the same manner holding in the same Order with the Reduction of doubled Ranks; and for the doubling Front, half Files, by the Rear half Files; the Words of Command are, Half Files, to the right hand. Double your Front. March. Rear half Files as you were. March. Rear half Files, to the left hand. Double your Front. March. Rear half Files, as you were. March.

And again, if you would Reduce, let the Rear half File stand without facing, till they are passed by the Front, half Files; then let them fall after their proper Leaders; but if by the Rear you intend to double the Front, half Files, the Rear half Files are to March exceeding slow, the Body standing still, and in the half Files be curious to observe well the right-hand Men; and in doubling of Rear half Files by the Front, half Files with the Reduction: The words of Command are, Front half Files, to the right about, double your Rear. Half Files March.

In this case, the three Front Ranks, or Front half

half Files must turn to the right-about, passing on the right hand of the Rear, half Files doubling unto them, and then to face to the left-about to their Leaders, without expecting the Word of Command; and in case of Command, *viz.* Reduction, Front half Files as you were. March; the Front half Files are to March slowly, three Foot distance from the right-hand Man, directing more left-ward, which reduces them to their former Ground.

If you are desirous to exercise in Doublings, observe the following Method.

Having drawn up the Battalion, and if it consist of Musketers, the Commander in Chief must give the Word of Command, *viz.* Musketers, Shoulder your Muskets; but if the Battalion be composed of single Pikes, those that are to March must be Commanded, *viz.* Ranks that are to double to the Right, Advance your Pikes. Ranks that are double to the Left, Advance your Pikes; and this ought to be taken by the Pikes as a general Rule, when they form a Battalion of themselves, always advancing when they are to double, fixing their Pikes upon the Ground, when they make a stand; but different from this in some kind, when the Battalion is composed of Musketers only for the Command, then is what is required in the ordering Musketers alone, and Pikes alone.

**To the Right, double your Ranks in Front, March.**

Here, if you would make your Doublings exactly true, then the Souldiers upon their parting from their left Feet, must come and place themselves in the middle of the distances of the Ranks they double; and if the Battalion consist of six Ranks in depth when they are to double by Ranks, either in Front or Rear, then must it lose one Rank of the depth of Ground, and the distances of the Ranks by that means shall become double to those with whom they were before doubled; this being well observed, and you intend to reduce the Battalion, proceeding thus, Ranks, as you were. Then to double to the Left, say,

**To the Left, double your Ranks.**

If you intend to double your Ranks by half Files, the Commands must be, *viz.* **To the Right by half Files. Double your Ranks in Front. March.** And the same Words are required to double the left by half Files, either in the Wings, or in the Rear; then to reduce the Battalion, the Command is only, **Ranks as you were.**

To double the Ranks in Front upon the Wings, so order it, that from the half File to the close File, the Battalion cut, or divide it self in the half Ranks; then the half Ranks on the left hand must face to the Left, and double upon the Wings of those two that have not changed their Ground. E The

*The manner of drawing up a Battalion, and the Officers taking their Stations of Parade, when they are to receive the King, or General, &c.*

**H**ERE the Battalion, or Regiment, being drawn up in Exercise, the Ranks at twelve Feet distance, and the Files at three, the Musketers sloping, and carrying their Arms well, the Pikes must order their Pikes in a close posture to their Bodies, holding them near to their Heads, the butt ends to the Latches of their Shoes; the Serjeants taking two, or one, on the right and left of every Rank at an equal distance, as the Souldiers are at in the File; but those on the Rear must place themselves at three paces from the last Rank of Souldiers, well ordering their Halberts, and having their Hats off, the Drums are to stand on the right and the left, even with the Front Rank of the Souldiers, and at the same distance one from the other. The *Hoit-boys*, are to be on the right of the Drums on the one side, and the Drums on the right on the other.

*The Officers Posts, or Places.*

Lieutenants to be divided equally at the head  
head

head of the right and left Wings of Shot, the Ensigns to be at the head of the Pikes in an equal Line, each two paces distant from the Body; the Captains to be divided on each Wing, advanced two paces before the Lieutenants, the Commander in Chief excepted, none are to be before the Ensigns, and he to be two paces advanced beyond the Captains, unless it be when a Regiment makes but one Battalion, and the Presence of the Colonel, and Lieutenant-Colonel be had, then the latter is to take his Post on the left hand of the former. The Major, who must be on Horseback, is to place himself in a direct Line before the Serjeants on the right Angle, somewhat more advanced before the Line of the Captains, and the Aid-Major being likewise mounted in the left Angle after the same manner.

If the King be to be received, then Pikes must be Advanced, and Muskets Shouldered, the same likewise to the Queen; but to all others, the Pikes are to be Ordered.

If a Company of Granadiers belong to the Regiment, it must be drawn up on the right of the Battalion, at three deep, about three paces being left between their Drums and those of the Battalion.

*The Order and Manner of Salute.*

As soon as it is observed the King approaches,  
 E 2 the



the Drums must beat a March, and the Officers are to Salute in their Order, as he passes by, keeping the Spear of their Pikes exactly with the proper Front, and not by any means turning their cross ways.

The Salute made, they without making a Leg, or Bowing, are to pull off their Hats, keeping them off with their Bodies upright, till the persons to be Saluted, are passed by.

The manner of the Ensigns Saluting is with their Colours at one Motion, bringing them near the ground directly before them, raising them altogether at one Motion, upon which they pull off their Hats as the former. The Serjeants are to stand with their Hats off, and their Halberts Ordered, facing the same way with the Battalion; and here it is to be noted, That if the Person to be Saluted goes round the Battalion, it must face as he moves, without altering the Posts.

This must be observed upon the private review of a Battalion; but if it so happen, that it be to be done in the Field, and the Army drawn up, each Battalion must salute with Pikes and Muskets Charged. The Musketers upon the approach to be Shouldered, and the Pikes Advanced, when the Commander in Chief proceeds to give the Word, *viz.*

*Recover your Arms.*

Upon this bring your Pikes and Muskets directly before you, the butt ends of your Pikes



Pikes in the Palms of your Hands, and the right Heel brought to the left Instep, and when the Drum first strikes the March, you must Charge with Pikes and Muskets at one Motion, and keep your Arms in that posture, till the person to be Saluted is passed by ; upon which these words of Command ensue.

**Recover your Arms.**

**Poise your Muskets.**

**Shoulder your Muskets.**

At which time the Pikes are to be brought to the Advance ; but in case of Marching, the Salute is somewhat different.

*Of Marching, and the Salute, &c.*

In marching a Battalion, be sure in the first place, to see the Files close to the right or left in their marching Order, which is so much distant, as they can conveniently have the use of their Arms, without incumbring each other, and greater Bodies in this case require more distance than the lesser, as half a Foot and more from the right hand Man, and so in Order to the rest ; when the Pikes being Advanced, and Muskets Shoulderd, the words of Command are,

**Files close to the Right, (or the Left)**

**To your close Order.**

**March.**

Then each man is to turn to the hand na-

med, and consequently closes to the distances and hand mentioned; and when this is performed, the next word of Command is,

**To your Leader.**

Hereupon the Serjeants are to see the Ranks kept at their Twelve large Feet distance, and being thus disposed, if it march in a Body, the Lieutenants must be in the Rear, at the same distance they were in the Front from the Soldiers; the Serjeants that were in the Rear, taking care of the Flanks that they keep even and well in Order, and upon the word **March**, they are in Front and Rear, to step with their left Feet forward all at a time, setting them down together, marching very slowly, the Pikes marching equal with the Wings of Shot, not in the least pressing upon each other.

When the Body is marched as far as is intended, then the Command to them must be, **Halt.**

**To the Right about.**

The Drums beating a Retreat, the Lieutenants in the same order and Method, lead them back to their Ground, as was before observed; and there again the word of Command is **Halt,**

**To the Right about**

**As you were.**

**viz. To the left about.**

At this word, the Lieutenants must quit the

the Rear, and come to their station in the Front, whilst the Serjeants in the Flank, who were removed from the Rear, take their places again.

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*To March in three Divisions; the Method and Order.*

**I**F you are to march a Battalion in three Divisions, the Captains must divide the one half at the head of the first Division of Shot, and the remaining half in the Rear of the last Division: And again, one half of the Lieutenants in the Rear of the first Division of Shot, and the remainder at the head of the last Division of shot: The Colours marching at the head of the Pikes, which are to be Advanced, the Commandent in Chief marching two paces before the Rank of Captains, at the head of the first Division of Shot; the Captains and other Officers exactly keeping the distance they were at first posted at, when the Battalion was drawn up.

The Officers that are appointed in this case to march in the Rear of the Division, are, as they march off, to fall after them; and the Serjeants that were posted in the Rear are to take care of the Pikes upon their marching: As for the Drums, they are equally to

be divided upon the Division, marching between the second and third Ranks. The Granadiers marching about twenty Yards before the Battalion, the Equipage of the Officers of the Front must march somewhat on the left hand, between the Battalion and Granadiers; the *Hoitboys* marching in the middle distance between the Collonel or Commander in Chief, and the Granadiers

In marching, the Collonel and all the other Officers must march with their Pikes underhand Comported, not suffering the Spear to descend too much, but keep it steady from swinging, &c. But if they have occasion to Salute, they must as they approach, Shoulder all together, that is, every Rank of Officers as they approach, carrying them level upon their Shoulders, performing the Salute, as if it was the Action but of one Man; nor must the first Rank of Captains Salute, till the Collonel or Commander in Chief has performed it, not standing still, or mending their Pace when they Salute.

The Officers pulling off their Hats, as has been directed in the Standing Salute, or in a Battalion, drawn up for a Review; the Sergeants must march with their Halberts shouldered, the butt ends uppermost, always upon this occasion marching with their Hats off when those that are to be Saluted pass by, and not to Salute the same Party more than

than once standing, and once Marching.

As for the Major, and the Aid-Major they have not any fixed Post appointed in Marching, but are attending for Orders on the Collonel or Commander in Chief; and if an Ensign be absent, a Pike-man, as he is qualified, claims the carrying the Colours before either Serjeant or Corporal.

If it so happen, that a Battalion in the March be attacked, they must immediately thereupon draw up, and face either the same way they March, or Wheeling to the Right or Left, recovering thereby what Advantages you shall see necessary.

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*How a Battalion ought to be Ordered if Attacked.*

**I**F you are marching in three Divisions, or a greater number, then if you be Attacked, and obliged to wheel to the Right, the first Wing of the Musketers must draw up on the right of the Granadiers, and the Pikes on the right of the right Wing of Musketers, whilst the left Wing of the Musketers takes the right hand of the Pikes, which is done with more Ease and Speed than by marching round the Rear.

As soon as you prepare for Defence, on the Chief

Chief Commander is for drawing up the Battalion in the same Method, he gives the words of Command, that the Rear, half Files of Muskietiers do double their Front to the Left in Marching, and upon the first Command to the Muskietiers, to make ready, *viz.* (to be Cock'd and Guarded) the Pike-men, without expecting Command, are to Port their Pikes, and the Drums to beat a Preparative, whereby the Rear must take notice to draw up, and at the same time the Ensigns must give their Colours to the right hand Man of the respective Companies, who immediately must retire with them to the Centre of the Pikes, and the Ensigns taking the Souldiers, Pikes, must march at the head of the Pikes: As for the Drums that before marched between the Ranks of the Muskietiers, as likewise those of the Granadiers, they are to be joined with those Drums that march with the Pikes, and the *Hoitboys* must joyn the Colours.

When the Drums beat the Preparative, the first Division excepted, every Division is to march up with as much speed as may be, not breaking or falling into any Disorder, the first Division marching slower, and not altering its former pace.

The Ranks in Marching must observe to close forward at Six foot, which must be well directed by the Serjeants, who are to look to the Order.

The



The Granadiers are to be divided into three parts, no part exceeding each other, and one of these parts must be with the Captain at the head of the Pikes, about eight paces from the first Rank, and the other two parts on the right and left of the Battalion, when those at the head of the Pikes are to receive the word of command, Present and Fire, and the first Rank of Musketers are commanded to kneel, and when they have fired, they must make ready their Granado's, and after the two other Ranks Fire, then are they to deliver their Granado's, and place their Daggers in the Muzzles of their Fire-Locks, and those Granadiers placed on the right and left of the Battalion, are to make their Fire as the Musketers Fire, viz. The two last Ranks must fire with the Musketers, and when they have so done, they must fix their Daggers in the Muzzles of their Fire-Locks; then the Front of Granadiers must have their Granado's ready, and likewise when the first Rank of Musketers kneel, they must do the same, and when the two last Ranks have fired, they must stand up, and upon the firing of the first Rank of Granadiers, they must deliver their Granado's, and fix their Daggers in the Muzzles of their Fire-Locks, as the others.

Observe, that when the adverse Battalion is so near, that the Granado's may fall amongst



amongst them, the Officers and Souldiers keeping their equal distance, the Commander in Chief gives the word to **Halt**, at which the Drums must cease, and the Officers, whose Post is at the Front, must Rank at the head of the Battalion two paces distant with their Pikes Ported, and four of the Serjeants that marched with the Pikes before they drew up, must draw up with them, *viz.* Two with the first Rank, and two with the last, on the right and left of each Rank, and the remaining Serjeants to be on the Ranks, and to be assisting to the Officers in the Rear, who are to be those Officers that took their march in the Rear before they were drawn up, and are to continue in the Rear of the Battalion, to take care of it, all, except the eldest Captain, who is to come up immediately to the head of the left Wing of Shot in the Front, and the Serjeants are to be very exact upon the Battalion, drawing up to order the Ranks at six foot distance, and the Files at the same; every Souldier for the beter use of his Arms, and the passage of the Enemies Shot, to keep at least a Foot from his right hand Man.

When the Commander in chief has given the word **Halt**, the next Command is, **Ranks of Muskettiers Kneel.**

This is to be done by falling back with the right Legs, without moving the left, keeping your Muskets so low, that the two other  
Ranks

Ranks without incommoding may fire over them, and upon the giving this Word, the Rank of Officers posted at the head of the Battalion must fall at once into the Intervals behind the first Rank of Souldiers, taking care at the same time, that the Officers perform their duties. The Officers having their Pikes in the posture conformable to the Pike-men, and those with the Musketers must observe to kneel as the Musketers do.

When the word of Command is given for the first Rank to kneel, the other two Ranks of Musketers are to close forward, and in the same manner the five Ranks of Pike-men as they can with conveniency, and use their Arms without any word of Command.

### Two last Ranks Present.

This must ever be observed to be done breast high, the first of the two stooping without any word of Command, and at the same word the Pikes are to Charge, and continue Charged,

Fire.

Recover your Arms.

At which word of Command the foremost, or Front Rank, must stand up, without expecting further Command, at the same time their Muskets being recovered strait before them, Cock'd and Guarded.

Front Present.

Fire.

Recover

**Recover your Arms.**

**Club your Muskets.**

**Fall on.**

This must be done with a Shout or Huzza, the Pikes continuing Charged, and the Drums beating another Preparative.

**Halt.**

Upon this word given, the Drums must be silent; and now in case of a Reduction, it must be done by this Order of Command, &c.

**Boise your Muskets.**

Hereupon the Pikes must be recovered from the Charge; the Granadiers must take their Posts, as before they were divided.

**Shoulder your Muskets.**

The Pike-men at this word of Command, must bring their Pikes to their Thighs, to their Advance; the Rank of Officers Advancing together before the head of the Battalion two paces.

**Ranks open backward, at twelve Foot distance**

**March.**

Rear half Files of Musketeers that doubled to the Right about, as you were.

**March.**

Officers, Colours, Drums, and Voltigeurs, to your proper Posts.

**March.**

If it so happen that a Battalion be more than once to Fire in Exercise, then before you  
fall

fall on, instead of Clubbing your Muskets, when the first Firing is over, the Musketers as they March, must make ready, and the Pike-men Port, noting by the way, that every right hand Man (being a Pike-man) of each Company must ever march with the Ensign's Pike.

The Drums must beat the Preparative, at what time the first Division draws up, either in Battalion, or single Company, being the most ready way to give notice to the Rear to draw up likewise; when the Preparative is beat, the Pikes Shouldered are to Advance, except the Command be given to the Musketers to recover their Arms, and then the Pikes are to Port, but no otherways in drawing up, but at the Advance; neither must the Ranks close forward, or mend their pace in Marching, but to draw up as at other times, except the Command be given to the Musketers, to recover their Arms, or make Ready, being the same posture, then they are ever to march, as has been before directed.

*In*

*In Marching by Subdivision, what is to be observed.*

**I**F a long March be designed for a Battalion by Subdivision, the Files must be counted and ordered according to the wideness or narrowness of the ways they are to March, posting one half of the Captains at the head of the first Subdivision of Shot, and the other in the Rear of the last, dividing the Lieutenants to every Subdivision of Shot for their better care of them, the Colours being likewise divided to march at the head of every Subdivision of Pikes and the Serjeants are always to march on the Flanks, never leading or bringing up a Division, except Commanded, and those Serjeants that are placed at the Rear of a Battalion, when drawn up, are ever to take care of the Pikes in Marching and in this way of Marching they are to March shouldering, in Files, but not in such Order as to jostle, or inroach upon one another; and although at sometimes it may fall out that more Men may be in one Rank than in another, yet the Spaces must not be Left but they are to file in Marching shoulder to shoulder, the Captains and Officers ever to March with their Pikes under-hand, unless it be when they pass by a General Officer,

or

or advance before a Guard, which they are to Relieve, or off the Parade, in which cases they are to Shoulder.

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### Defiles, *their Management.*

**A** *Defile*, properly so termed, is a miery Lane, or difficult place of Passage; if it happen withal to be narrow, and to make good the passage you would draw up as soon as you have passed it in order, then make the Ranks Files, and if the right-hand Man is to File first, and the rest of his Rank must follow him, then are they to Rank again as they were, which proves more advantagious than Files filing; for this Reason, *viz.* because it presently makes a Front to the Enemy; and in case of great Ranks, they may File two a-Breast, beginning with the outermost File-Leaders, and if the space will admit, that is in large *Defiles*, the Commander may make a Front by drawing off, as appears best to his Discretion.

**F**

**Wheel-**

Wheeling, *what it is, and how to be observed, &c.*

**W***heeling* is a Motion in Military Exercise, which, by turning, brings the Head of a Battalion to the Flank ground, which is necessary, if the Wing of a Battalion be attacked, or when it is advantageous to attack the Enemy in the Flank; and on many other occasions, as the advantage, or disadvantage of War offers. But to the purpose:

The Battalion drawn up, the Officer in Chief gives the Word of Command, *March*; and when the Battalion wheels upon the first Head of the right-hand File, then it wheels to the Right, and when it do's the like upon the Left, it wheels to the Left.

A Quarter Wheeling is termed the first Wheeling, as it happens when they take a Compass to possess their own, or the Ground left by another Battalion; and in all Wheelings such Compasses of Ground must be taken as that they leave no Gap, nor press each other out; and to avoid this, every Man must take notice of his distance at File, the Word of Command being given to Wheel, and then if you are to Wheel to the Right, be sure to keep that distance from your right-hand Man, the Ranks taking great notice of their Leaders,



ders, closing very quick to the Left in the Rear, observing to do the like to the Right, if the Battalion wheel to the Left.

*The manner of Wheeling a Battalion, or Body, when they March in Division.*

The Battalion being upon the March, and commanded to Wheel, when it is so ordered to the Right, the right-hand Man keeps his Ground, only turning upon his Heel, whilst the left-hand Man moves about with a swift pace, till he makes an even Line with the right-hand Man, and the Word be given to Stand, the second Rank observing not to begin to Wheel till they have taken the ground of the first; by which means every Rank is to March successively forward up to their Leader's Ground before they attempt to wheel; for therein lyes the dexterity of this way of Wheeling.

The Soldiers, before they offer to Wheel, must take notice of that hand in Marching, to which they are to Wheel, for as the right-hand Man is to be noted upon the March, when they wheel to the Left, so on the contrary the left-hand Men, when they are to wheel to the Left. If the Service requires wheeling in single Ranks, observe :

*The manner of Wheeling in single Ranks.*

When it is requisite for the Service, to wheel in single Ranks, for lining, or guarding. The Words of Command are, *viz.*

Ranks, to the Right, or if to the Left, then Ranks to the left-hand, *Wheel. March.*

The right, or left-hand Man, to which the Wheeling is made, being to keep his ground, only turning till the Line comes direct, the rest being all to wheel together in one Rank, and at the Word of Command, *March*, the Colours must wheel in before the Ranks, the Drums taking their places on the right and left of the Ranks, as must the Serjeants, observing, that they be closed to the right or left, without leaving any unseemly Space; and to reduce again, observe the following Order.

*The manner of Reduction.*

In doing this, the left-hand Man of each Rank must stand, and keeping his Ground only turn about to the Left, and at the Word, *March*, the rest that compose the Rank must wheel to their places.

*The manner of Wheeling backwards, by Half Ranks.*

Here observe, there must as near as possible, be an equal number of Men in every Rank, the right and left-hand Man of each standing firm on his Ground, and turn only to the hand named; the Words of Command being, *viz.*

*By half Ranks wheel to the right and left backwards. March.*

Whereupon the Battalion opens, the half Ranks separating and falling back to the right and left-hand Men, which leaves an interval, and forms two Ranks opposite to each other, the Officers and Colours dividing in the same manner, taking their Posts, and Ranging before the Souldiers to make a Guard, the Sergeants and Drums placing themselves equally on the right and left; This being observed, the manner of Reduction is by these Words of Command, *viz.*

*By half Ranks to the right and left inward. Form your Ranks as you were. March.*

Here the half Ranks are to wheel from the right, and the left, and close the interval, by which means they become whole Ranks; for having wheeled inward at the word *March*, they are no more half Ranks, but whole Ranks in a Marching Order. In case of Closings and

Openings there are divers Words of Command required, *viz.*

Ranks, close forward to Order, *viz.* (three foot) March.

Ranks, close forward to close Order, *viz.* (a foot and half) March.

Ranks, open backward to Order, *viz.* (three foot) March.

Ranks, open backward to open Order, *viz.* (six foot) March.

Ranks, open backward to a doubling distance, *viz.* (twelve foot) March.

In this manner of proceeding, to open backward, the Ranks must fall backward in Order, without changing the Aspect, having ever regard to their Leaders, and right-hand Men.

The further Words of Command are, *viz.*

Files, close to the Right. March.

Files, close to the Left. March.

Files, close to the Centre. March.

Files, open to the Right. March.

Files, open to the Left. March.

Files, open from the Centre. March.

By the Files opening to the Centre, is meant their facing from the Centre, and if there happen to be an odd File, that remains, and is properly termed the Centre File.

When Files are to open to the right, or to the left, they must keep their Station without changing in any manner, till the Word March be

be uttered ; whereupon they are to face to the hand named, taking their distances commanded, each from his Leader. In all Openings, as have been said, the contrary Man must be observed ; if the Command be to open to the right, the second File from the right must, by short steps, first take its distance, suffering the Leader to pass as far as it is commanded, before you move, the rest of the Files in their turn and order, observing to do the same ; as for the left-hand File, it is not to move ; in all Openings they are to move directly forward with a slow pace.

*Thus the young Souldier may his Duty read,  
But now to greater Things we must proceed ;  
The Ratling Drum and Trumpet calls us on,  
A Souldier's Work you know is seldom done,  
But ever Travels with the glorious Sun.*

### *A further Consideration of Doublings, Relating to Foot, &c. and their Reduction.*

1. Ranks, to the Right, double, March.
2. Ranks, as you were, March.
3. Ranks, to the Left, March.
4. Ranks, as you were, March.

In case of doubling the Ranks, those that are to do so, must observe their right-hand Men, and move as they move, beginning to move with the Foot, next the hand then named, and so to come into Order; this doubling the even Ranks, must be observed to double into the odd; and when the odd Ranks are to double, you must face the Body to the Rear, and the like Words of Command will perform it, or you may further proceed, *viz.*

**Odd Ranks that stood to the Right-about, Double the even Ranks.**

*The Reduction of Ranks, &c.*

Those Ranks that double, must face first to the contrary hand, and then with the contrary Foot bring themselves to the former Ground, but not to move in the least, till the word **March** be given; and this is held upon all doublings of Ranks, and half Ranks, notwithstanding the contrary Hand is to be turned to, they must double on to the Ground they double to, yet coming to their proper Ground, they there must turn to the hand they doubled, and thereby they are brought directly to their Leaders; and in the like manner Files are doubled, remaining much the same with the Reduction of doubled Ranks.



*The manner of doubling Front, half Files, & half Files of the Rear.*

The Words of Command in this case are,  
Half Files, to the Right-hand, Double your  
Front, March.

Rear half Files, as you were. March.

Rear half Files, to the left-hand, double  
your Front. March.

Rear half Files, as you were. March.

If this happen upon the March, the Rear  
half Files must move into the Front by a new  
swift motion, the Front half Files at the same  
time continuing there, each observing the  
right-hand Man.

In case of Reduction, the Rear half Files  
must not face about, but stand still till the  
Front half Files are passed, and then fall in,  
and follow the proper Leaders, but if the oc-  
casion require the Front half Files to be dou-  
bled by the Rear, the Rear half Files must  
March softly, observing their right-hand  
Men, so that all the Ranks may double at one  
time.

Observe in Reducement, as it is in the dou-  
bling of single Ranks, that no Man must move  
till the word of Command, March, be given,  
upon which they turn all together upon the  
contrary hand they doubled on, and when they  
come up to their own Ground, they must turn  
to the hand they doubled to.

*Rear*



*Rear half Files doubled by the Front half Files.*

Here the Words of Command are, *viz.*  
**Front half Files, to the Right-about, double  
 your Rear half Files.**

This Word of Command given, the three Front Ranks, or three half Files must turn to the Right-about, and going on the right-hand of their Followers, or the Rear half Files, they must double into them, and when they have doubled, face to the Left-about to their Leader, without expecting any Word of Command.

*The manner of Reduction.*

The Words of Command are.

**Front half Files, as you were.**

**March.**

Whereupon the half Files must March slowly, keeping at three Foot from their right-hand Men, by which means they incline to the Left, and are brought directly upon their former Ground; and it is only doing thus, and observing the contrary hand in doubling to the Left.

Now it remains that somewhat more particularly than has been said of the several manners of Fireings be laid down, &c.

*The manner of Firing to the Front.*

When the Souldiers are to Fire, and keep their Ground, 'tis expedient that the Body be made close as well in Rank as File, as will stand with the use of Arms, and hereupon Command must be given, *viz.*

Musketiers make ready all.

Then they are to have their Arms strait before them, ready Cock'd and Guarded, and the Pikes being Ported, they must charge when the Musketiers Present, and then ensue the further Words of Command, *viz.*

The five first Ranks kneel.

The Rear Ranks Present.

Fire.

The fifth Rank stand up.

Present.

Fire.

The fourth Rank stand up.

Present.

Fire.

In this manner the rest must be Commanded, and when they have fired, they are to Charge again, and make them in readiness, to expect the next Word of Command ; and this Order of Firing may be performed by two or three Ranks at a time, the first kneeling, the second stooping, and the third standing.

In Fireing to gain Ground, observe this Order : The Battalion Marching, he that is to give the Word of Command, proceeds thus :

*First Ranks of Musketers make ready.*

*Halt.*

Upon this the entire Battalion must Halt, then Command the Musketers of the first Rank

*To Present.*

*Fire.*

And as soon as they have fired, they must recover their Arms, not expecting any Word of Command, and with a swift pace file off to the Right and Left into the Rear, observing ever when the first Rank Presents, the next Rank is to make Ready, and as the first files off, the next must make good the Front, the Battalion Marching, and every Rank to Fire in this Order, and at the presenting of every Rank, the Pikes without Command.

*The manner of Fireing to the Front, Retreating.*

If the Enemy press your Battalion in Front, and you cannot make good your Ground, you may, to prevent their pressing on, Fire, Retreating in single Ranks in the same manner, as when you are to gain Ground, except, (after the firing of every Rank and their having filed off to the right and left into the Rear) instead of the next Rank's advancing to make good the Front

Front of the Pikes, the Pikes must make their Retreat to the Musketers, who must keep their Ground, till the Pikes make an even Front equal with them, and the rest of the Ranks in their Fireing and Retreating are to observe this Method.

*The manner of Fireing in the Flank.*

If a Battalion be upon the March, and is constrained by reason of the pressing of the Enemy to Fire, to both Flanks it is to be thus performed,

Keep the Ranks at six Foot distance, and the intervals of that distance must be carefully observed between the Muskets and Pikes in their Divisions ; and this must be done by causing the Musketers to encline to the right and left, upon every Fireing to the Flanks.

The Words of Command are, *viz.*

To the right and left hand, Files of Musketers make ready.

Which they must do, and keep along with the Body, not facing to the Flanks, till they are commanded to Present ; and when they have Fired, they are to face to the Rear ; being thereupon led a-thwart very quick by the Serjeants, and so up between their own Divisions and the Pikes ; and as soon as ever the next Flank Files Present, those that succeed, or support them, are to make ready, without expecting

pecting the Word of Command, as in many other cases have been instanced, keeping along with the Body, till they are bid Present ; and this Order must be observed, till all the Files have Fired, each Man upon Firing, falling back with his right Leg, in case of firing to the Rear, which many times stands in stead, especially upon being Charged by a greater number, or upon a Retreat ; you must observe the following Order.

*The manner of Firing in the Rear.*

The Words of Command directing this way of Firing, are, First,

**The Rear Banks of Musketers make Ready.**

By which is understood Cocking and Guarding.

Then Present.

Fire.

Upon these Words, the Souldiers must turn to the Right-about, casting their left Legs backward, then Present and Fire ; which done, they must recover their Arms without any Word of Command, Marching up into the Front, and there taking their Stations ; and note, that as soon as the first Rank is bid Present, the next is to make Ready without Command, but must not face to the Rear till Commanded to Present ; and when the first Rank

is bid to Present, the Pikes must March till such time as the Rear of the Pikes are even with the next Rank of Musketers that have made Ready, by which means room will be left in the Front, for that Rank that Fires to bring themselves up even with first Rank of Pikes, every Rank being to do the like by the same Order.

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*The manner of Firing the Street-way.*

**T**His Firing is generally made to defend against Horse that attempt to Charge in the Front, when the Pikes are few; then the Rear half Files of Pikes must double the Front, upon this Command, *viz.* Rear half Files of Pikes to the Right. Double your Front.

March.

Musketers, to the Right about, March.

The Musketers being clear of the Pikes, the following Commands are to be given.

Musketers, face to the right and left inwards.

March.

Upon this Command, they are to joyn the Centre of the Pikes, and the Commandant proceeds, *viz.*

Face to the Leader.

Here-

Hereupon the care of the Officers must be to observe the Shot, and the Pikes equally Wing, the former keeping no more distance from the latter than to give space for the Ensigns, Drums, and Hoitboys to come between ; then the Captains are to take place in the first Ranks of the Pikes, and the Lieutenant with the Musketers ; and according as the Body is bigger, or lesser, one or more of the Serjeants must see the two first Ranks of Musketers to face to the right or left ; and when the Command is given by the Chief Commandent, *viz.* **Post your Pikes**, the Musketers of the two first Ranks must make Ready, and at the Word, **March**, the two first Ranks are to be brought up by the Serjeants to the right or left, according as it is ordered, who by two, and two filing up, they thwart under the Pikes, and there they are to face to the proper Front, without expecting any Word of Command, and to make two Ranks ; and that some Fire may be ever reserved, 'tis most expedient to Fire but one Rank at a time, the second being cock'd and guarded, to stand either of them as near to the Pikes as the Management of their Arms will permit ; then the Word is to be given, *viz.*

**First Ranks of Musketers kneel.**

Upon which they must fall back with their right Legs, keeping their left fixed, their Arms upright before them, their left hands even with their



their Mouths ; then the further Word of Command is given, *viz.*

**Present.**

**Fire.**

Immediately upon Fireing, they are to recover their Arms without expecting the Word of Command, and so file off on the contrary hand they advanced on, with as much speed as they can, the Serjeants leading them close by the Body unto the Rear, placing them there, in their proper Files.

The Musketers being commanded to Present, the Pikes must Port very low, without any other Word, and in the same Order to raise their Pikes as soon as they have Fired, to their proper height, the sub-altern Officers always minding, that the next Rank of Musketers be ready at the Angle to make their March under the Pikes, instead of the second Rank, which is to take the place of the first, when the first Rank has Fired.

In this manner of Fireing, if the street to be defended be very broad, then a space or interval must be made, over and above the passages on the flanks, sufficient for two Men a-breast, which will prevent the Horse from making any advantageous Attacks.

To reduce this Order, the Words of Command are, *viz.* Musketers face to the right and left outward, March ; and as soon as they

are quit, the farther Command is given, viz. Musketers, to your proper Front March.

This they must observe to do, till such time as they are even with the first Rank of Pikes; and then the Officers, Drums, Colours, and Hoitboys must take their proper Posts.

*Of the hollow Square, and the manner of forming it by Words of Command.*

**I**F you proceed to this, the Battalion must be drawn up in Ranks, at Twelve Foot distance, the Files being at three, then the Muskets shouldered, and the Pikes advanced, the Words of Command ensue, viz.

Colours, Drums, and Hoitboys to the Centre of the Pikes, March.

Ranks close forward to Order, March.

Three outward Files of Pikes on the Right and Left, double your Files to the Right and Left inwards, March.

Half Files of Musketers to the left hand double your Front, March.

Files close all to the Right, to your close Order, March.

To your Leader. Pikes face square. Pikes close forward to the Front. Left Wing of Musketers to the Right about. Both Wings of Musketers March. Halt. Musketers Face to the Left, March. Halt. Face to your proper Front. All Officers and Serjeants

Serjeants take your Posts, March. Grenadiers take your Posts in the Angles March. Face square. Musketers make ready.

At this word the Pikes must be ported very low, when the Musketers present, and the next Word is, First Rank kneel, which must be done in such a manner that the two last Ranks may advantageously Fire over. Then again, The two last Ranks present, Fire. Having fired, the next is, Recover your Arms, upon which the first Rank is to stand up with their Muskets recovered, ready cock'd and guarded, whereupon the two Ranks that have fired take the opportunity to Load again, and these Words of Command ensue, viz. Front Ranks present, Fire, which done, the Commandent proceeds, viz. Recover your Arms, and hereupon the Pikemen recover from their Port, then again To your Leader, March, Halt, Face Square, &c.

These being performed, after the same Order they may March, and fire to every Front; noting, that when they are bid to Face to their Leader, it must be to the Commandent in chief, wherever he takes his Station; but in facing to the proper Front it must be done to the Front of the Battalion, as it was before it was formed into this manner of Figure.

*Words of Command used to reduce this Form.*

The Battalion faced to the proper Front,

the Commander in chief proceeds, *viz.*

Grenadiers take your Posts on the right of the Battalion, March.

The Right and Left of each Wing of Musketers face to the Right and Left outward, March. Halt.

The three Files of Pikes of the Right and Left that doubled as you were, March.

Musketers Face to the Right, March. Halt.

To your Leader.

Rear half Files of Musketers that doubled to the Right about, as you were, March.

Ranks open backward to Twelve Foot, March, Colours, Drums, and Hoitboys to your former Posts, March.

Files close to the right, to close Order, March. To your Leader.

*Things proper to be observed by a Commander, being in an Enemies Country, &c.*

**H**E must be carefull to observe the situation of the Place, and gain as good Intelligence of the Enemy as he can, and if he Command a Troop of Horse, he must beware of Skirting the side of a Wood, for fear  
of

of an Ambush, the strength of Horse consisting in the open Country, as that of the Foot do's in a Wood; for the Enemy is all ways to be expected to take advantage; it is therefore dangerous for a Troop of Horse, by reason it may be fallen upon before it can get to any secure Post.

An Officer of Foot marching through an inclosed Woody Country, must avoid, if he can, marching in the middle of a Plain, or too near a Wood, by which means if the Enemy approach he will have time to consider what course to take; and if he be attacked by Horse, then ought he to retreat unto the Wood, Skirmishing to make it good; for if he get into it, the Horse will not attack him there; but if he has to deal with Foot, and observes himself the weakest, he must regain the last Defile, or narrow Post, and drawing up in a Battalia, dispute it, till he can better secure himself; and the like is to be observed by the Horse, if overmuch pressed; wherefore it is good for a Commander to take special notice of the places he passes through, sending his Scouts before him to discover the Enemy, and search the Places where Ambushes are suspected; for although it be in a Village, there may be a Party of the Enemy, who will suffer the Scouts to pass by, and conceal themselves till they see an opportunity to set upon the main Body.

When an Officer is arrived where he intends to Encamp, he ought to Draw up his Men, and having set his Guards, he may permit them to take some ease, by alighting from their Horses, if it be Horse, or if Foot, to repose themselves, always facing towards the Town or Place possessed, or suspected to be possessed by the Enemy, having, if possible, a Defile in the Front and Rear, or some other security, to prevent surprise; the Scouts ought to be sent out from one half hour to another, and when day appears they may venture farther into the Country, and if there be no convenient Town, or Place, the best way, if two or three days March in the Enemies Country, is to lye in a Wood, when it has been well searched, to prevent an Ambush; nor must an Officer suffer his Men to straggle, though he be near a Friendly Town; for it may so fall out that a Party may lye hid, who may fall upon him and rout him, though a lesser number; for there it is the Enemy most commonly lays Ambuscades, thinking, as it often happens, that by a Confidence of Security they shall find Men negligent and disordered.

When at any time the Word is required of a Party you meet, it is generally given by the weakest, however it ought not lightly to be credited, nor the Souldiers to Return their Arms till the Officer be assured whether

whether they are Friends or Foes ; for many times a Defterter may betray the Word to the Enemy, and he make an advantage of it.

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*Considerations in Marching an Army through an Enemy's Country, &c.*

**I**F the War be carryed into the Enemy's Country, to besiege or relieve any place, whether the Enemy keep the Field or be beaten, Caution ought to be had, especially in Case of the former, nor is it other wise to be believed but he may Rally again ; wherefore it behoves the General to March close, so that the Army may be in a Condition to open its passage ; to do which, it ought to be divided into little Bodies, the Cavalry placed upon the Wings in Front and Rear of the Bodies ; the Infantry marching in the middle, in a gross Battalion ; the Artillery upon one side, guarded by an experienced Regiment ; and so it happens that an Army never undergoes more difficulty than in an enclosed Country, full of Woods, and Rivers, especially if in an Enemy's Territories where so many difficulties will arise.



*Of marching in a Woody-Country, &c.*

**T**HE most probable Advice that can be given in this case, is to send the Pioneers, supported by Horse and Foot, to cut open ways of more easie passage, fill up the Ditches, and lay over Bridges, and to do what else is required, getting by Scouts, and commanded Parties, what Intelligence there can be had; and the General not trusting altogether to others, must be careful to inform himself; and if he meet with a Bridge, or difficult Pass, defended by Curtains, Bastions, or any other Heights, the Engineers having well viewed it, it will be convenient to detach a Party, to try whether the River be fordable, and these being Horse, may carry over each a Foot-man behind them, which will more facilitate the Passage; but if there be an Eminence to defend it, on which Canon are placed, then he may raise a cross Battery in the most advantageous place, and endeavour to dismount their Cannon; but if the Entry be fortified with a Bastion, then a commanded Party of resolute Men must be detached to attack it, which must be done suddenly, and with much Vigour; for that daunts the Enemy, when on the other hand, delay encourages them to stand out.

*How*

*How a General ought to behave himself  
when he meets with Castles and strong  
Fortresses, in his March.*

TO overcome these Difficulties, the Engineer and Marshal *de Camp* must look out the most advantageous Ground to place the Cannon for Battery, and observe the Enemies Cannon how they bear as also their Sally-Ports, &c. and if he designs to make himself Master of them, he ought to take the most convenient Posts, not only to annoy them, but to prevent their being Succoured, and raise a convenient Battery on the weakest side, or that which by the Approbation of the Engineer lies most open to the Attack, causing the ground to be distributed for an Encampment, as the Quarter-Master General shall think fit, and if the place to be forced prove strong, Earth must be cast up to secure the Approaches from the Cannon or Shot, running Lines Traverse-wise, and Indenting, so that they cannot bear upon those that approach till they come to the breach made by the Batteries, or undermining any part, where they can charge their Mine, and throw down the Wall; but if it be not of extraordinary Strength, requiring a formal Siege, then a resolute

resolute Party may be detached from the main Body, supported by others with Scaling-Ladders, Faggots, Spades, Shovels; Pick-Axes, &c. to fill up a Trench or Ditch, whilst the Armed Bands attempt to force the Gates with Petrades, or the like Engines, or scale the Walls, ever maintaining and making good their Posts: but in this case the Methods are various, as the Service required offers it self more or less difficult; and therefore we presume not to give exact Rules for what frequently alters.

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*Of Encampments, and how they are usually Managed.*

THOUGH the manner of Encamping frequently is attended with some variation; yet to give the young Souldiers an insight in these Affairs will not be unnecessary, as to what has been lately practised.

When an Army, or any great Body is to Encamp, it is usually disposed in Lines with a Reserve, concluding the ground at the same time to be convenient for the so receiving them, and if the Lines are but two, there ought to be 300 paces distance between them at a yard, the Pace and the Squadrons of

of Horſe have for every one, five and thirty paces of ground allowed, and the like ſpace between the one and the other, that ſo without diſorder, they may march out if there be any occaſion to Engage.

As for the Infantry, if they Incamp fix deep they muſt have 80 paces at three Foot, the pace allowed, or more if the Scituation of the ground require it, and between the Squadrons of Horſe and Battalions of Foot, the Line muſt be forty or fifty paces diſtant. The Artillery ought to be placed upon the firſt Line of Infantry at ſuch Advantage as may beſt annoy the Enemy if they come to make any Attack.

The Baggage and Ammunition take their place between the ſecond Line, and the Body of the Reſerve on the right Hand, and the Proviſions on the Left, or near the Tent of the Commiſſary General of Proviſions.

The Quarter-Maſter, and Serjeants, as well Horſe as Foot, are to pitch their Tents in the Front, or Head of their Squadrons, or Battalions, and the other Officers Tents behind; the principal *Corps du Guard*, and the Parading place claims to be at the Head of the Camp, where the Arms, Enſigns, and Colours are Lodged.

The Poſts of the Horſe are on the Wings, and the Foot take their Station in the middle, and to every Squadron, conſiſting of three  
Troops

Troops, and fifty Men in a Troop, fifty Paces are allowed, and every Battalion consisting of sixteen Companies, and fifty Men in each Company ought to have a Hundred Paces for their Encampment.

As for the Dragoons, they are not Encamped in the Body of the Army, but have their Camp a little separate at the Head, or Wings, to which the greatest Danger seems to threaten, as being the Out-guard for the Army, and each Regiment ought to have a Guard at the Head of their Camp, and the Major-General for that day, is to take care to place the great Guard in a convenient place, at a distance from off the Army, towards any expected Danger, which may discover any approach before it come too near, and thereby prevent any Surprize, for Caution is to be used where Danger is not, as well as where it is.

*Remarks upon the Encamping of Horse.*

**I**N Encamping a Troop, if it consist of a Hundred Men, they ought to have seventy Foot in Front allowed them, and two hundred in depth, eight Foot in breadth, and twelve in depth must be accounted to two Horsemen, to make their Hütts, or Barques, and the Men and Horses are to be Lodged in two Ranks,

Ranks, the Horses Heads standing towards the Hutts of their Owners; yet, between the Hutts and Stables there ought to be an Interval of eight Foot: The Captain's Tent to be at the Head of the Barques of his Troop, possessing the whole Front, and between the Lodging of the Captain and the Troop, there must be the space of twenty Foot, a Lane of ten Foot must be likewise between the Stables, that the Horses may be brought out without incumbering each other, and behind the Troop, the Sutlers ought to place themselves at about twenty Foot distance; and if any considerable number of Troops Encamp together, then twenty Foot distance is allowed between Troop and Troop, or more, as the commodiousness of the Ground will allow.

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*The manner of the Encampment of Foot.*

A Hundred paces is commonly allowed for the Encampment of a Battalion of Foot, divided by the Quarter-Master into several Stations, he allowing for each Hutt or Lodging a Square of 7 Foot, 12 Foot to the By-street, and 15 Foot to the great Street, and two Foot distance between Hutt and Hutt, every Company composed of fifty Men ought to have ten Hutts; and the Kitchen for dressing

ing Provision, ought to be just over against the Hutts at 12 Foot distance, the length of the Kitchen 12 Foot, and the breadth 8, standing about 30 paces from the Captains Tents, and 40 paces between the Tents of the Sub-alternate Officers, and the Captains; the remaining ground being for the encamping of the Field-Officers, and the Captains Equipage; the Hutts of the Serjeants are to be at the head of the Souldiers, opening to the Front; the Sutlers to Encamp behind the Tents of the Officers at a convenient distance, and about 30 paces are allowed between one Battalion and another; the Collonels, Field-Officers, and Staff-Officers Tents, ought to be in the Centre of the Battalion behind the Captains Tents, and the Pikes to be at 18 Foot distance from the Hutts; the Muskets to stand the like distance, and the Drums and Colours to be placed within the hollow of the Pikes.

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*Things worthy to be observed in Relation to Garrisons.*

THose Officers that take place in a Garrison are usually a Governour, a Lieutenant Governour, a Major, Aid-Major, and Captains of the Gates.

The



The Governour, above others, is obliged in this case, to have a care of the place, and see that there be no wrong done to the Inhabitants; and furthermore, he is to appoint the Guard Rounds, and Patrolls; to give the Word each Evening; visit the Posts; keep the Officers and Soldiers in such Order, that their Duty be performed: observing, that frequent Parties go abroad to get Intelligence, and thereby prevent surprize; and in the Governour's Absence, the Lieutenant-Governour has the same Charge upon him, and commands with the like Authority.

The Major's Care is to see the Guards mounted, the Posts and Rounds assigned, he orders the Centinels, and goes every Evening to receive the Word from the Governour, giving it about to the Quarter-Master and Sergeants upon the place of Arms, and likewise goes his Rounds; the Major also visits the Corps of Guards, and observes that the Soldiers Arms are well placed, and in good Order, ordering the necessary Ammunition to be distributed amongst them, he takes care of the Gates, being shut and opened, and is accountable to the Governour of what passes, and gives him a relation thereof; the Officers that are in Garrison, are to be obedient to the Governour, or Commander in Chief, and not to stir thence, without Leave in Writing.

The Captains of the Gates are to go Morning

ing and Evening to the Governour's House to receive the Keys, that they may open and shut them ; and frequently there is in the Garrison, if it be in a Frontier-Town, more especially, a Commissary of the Artillery, or Store-keeper, whose care it is to keep a Reckoning of the Ammunition, and to distribute it according to the Governour's Order, and always one Gunner is to be upon the Guard, at the Batteries. There ought to be likewise a Commissary of the Provisions, and if there be any suspicion of an Enemy, some of the Garrison ought always to be at the Gate, to observe Strangers that go in and out, and the Centinels are to suffer no Carts, or Waggon to stand, or stop upon the Bridge, or under the Gate, and the Inn-keepers, and others, must give an Account to the Major every Night, what Strangers they Lodge.

As for the exact time of mounting the Guards it cannot be set down, by reason many vary, being set sooner, and others later, as pleases the Governour ; but the frequentest time is about Two in the Afternoon ; and whilst the Drums give them that notice, the Serjeants and Corporals cast Lots at the Major's House for the Posts and Rounds, which are writ down in a Register to that intent ; then they return to their Companions, who assemble before the Captain's Quarters, and if only detached Men mount, and  
not

not whole Companies, they are lead by the Serjeants, the Drums beating the while, as far as the place of Arms; and when the Detachments are drawn thither, and formed in a Readiness to Mount the Guards, the Major or Aid-Major, makes the Captains, even to the Serjeants, draw Lots for their Posts and Rounds; always observing in the weakest Places to post the strongest Guard with skillfull Officers, and not till the Officers have taken their Posts does the Major order the Main-Guard, or Guard of Arms to March off: then he causes those of the Gate and Bastions to do the like, and after them, those that were without, and during the time the Guard is mounting, those Officers who are to be Relieved put their Men in a posture of Arms, and Draw off from the Guard, posting themselves at the Head of their Souldiers, over against those that are to take their Places, and deliver to them whatever Orders there are, whilst the other Corporals do the like to the Corporals that are come on, and those that are Relieved being Drawn up at the Place of Arms, they are there dismissed, in order to refresh themselves.

Those Officers that have Mounted the Guard, proceed thereupon to Command the Souldiers to set down their Arms, the Pikes at that time being advanced, and the Muskettiers shouldered, which is done upon these

Words of Command, *viz.*

Recover your Arms.

Ranks file off by Division to the Right and Left. March.

Set down your Arms in good Order.

This done, the Corporals upon the Soldiers setting down their Arms, receive Orders to be carefull in all things, that they may be in a Readiness to prevent Danger, or Surprise; and here the Out-Centinels upon the approach of any Stranger, whether Horse or Foot, are to make him stand, and call their Corporal, who is to give notice of it to the Officer, and he to send him to the Governours House, with a Guard, to know his Business, and if the Centinels discover any Troops, though at a great distance, they are to give notice to the Main-Guard, and the Officers are to make the Barriers fast, and draw up the Bridges, suffering none to pass, unless an Order be brought from the Governour, by the Major, or Aid-Major.

There is in all, or most Garrisons, a Bell to give notice to those that are abroad to repair home a little before the time of the Gates being shut, and then the Keys are fetched from the Governour, and returned again, so that none can pass after the Gates are shut; and then one half of the Guards draw off upon the Rampart to pass that night in the Corps of Guard in the Bastions

ons or Curtains and whilst some Soldiers are ordered by the Corporal to fetch Fire and Candle, the Words are received by the Serjeants at the place of Arms, and then it is carried to the Officers, and dispersed about amongst the Corporals, and after that, none, whether Towns-men or Strangers, are to be upon the Ramparts, without giving an Account of themselves, especially when the Taptooe is beaten; and the Major himself, when he goes the Rounds is received by the Officers of the Guards by their Corporal, attended by two Musketers giving the Word but once, *viz.* at his Round-Major; but when the Governour or Commander in chief is received upon the Rounds, he may require the Word as many times as he thinks fit; all other Rounds are obliged to give the Word, and the Corporal receives it with his drawn Sword at the Breast of the Party, and where there is the least thing suspected in a Garrison, the Rounds go frequently as every quarter of an hour, that the Ramparts may not be unprovided, and care is taken to know who neglects; and thus Rounds are made with Light; wherefore at the Approach of it, the Centinel must demand Who comes there? with such an audible Voice that it may be heard by the next Guard, and he that approaches must reply, or may be in peril; for the Centinel is not to

let him come within his Arms, and the Answer is generally the Round, the Round-Major, or the Governour's Round being to be received not by the Centinel, but the Corporal, who is called forth for that purpose, and he is to bid him that has the Word Advance, which upon coming forth he gives him in his Ear that it cannot be over-heard; but if the Word be wrong, the Officer of the Guard is to have notice, and the Party to be secured, if he sees occasion; and although in the night-time the Centinels stand with their Pikes charged, and rest their Muskets upon the passing by of the Rounds, yet in the day-time it is the contrary; for then the Pikes are ordered, and the Muskets shouldered. As for the Out-Corps of Guard they pass the Rounds about the covered Ways; but there is no Word required of them, they being only to listen, and give notice if any thing happens.

As for the Patrolls they are made in the Street by a Serjeant, commanding about six Soldiers of the Main-guard, and then the Soldiers are to be in their Quarters, and all publick Houses within the Garrison to shut up their Doors; and at any time when the Alarm is rung, all the Soldiers are to hasten and present themselves before their Captain's Quarters, in order to his Leading them to the Posts assigned by the Major; and when day appears the *Reveille* is beat,

and



and the Keys are fetched again from the Governour, and the Soldiers are commanded off the Ramparts, and drawn in two Ranks with their Muskets presented, till the Gates are opened, and a detached Party must be sent out into the Suburbs, adjacent Villages, and narrow ways, the Bridge being drawn up after their going out, till they return and bring News the Coast is clear, thereupon the Bridges are let down; then the Out-Centries being placed, the Keys are carried back to the Governour, and the Souldiers are commanded to set down their Arms; though were there are any considerable number of Horse in Garrison, it is their Business to go out upon Parties, and see that the Roads are clear, and every Officer is accountable for his Post, &c. All Governours, or Commanders in chief should have their Doors guarded by a Centinel, or a greater number, according to their Quality in Command. These are the chief things, and indeed the most material, and ought to be carefully observed; for it has sometimes appeared, that the safety of a Kingdom has depended upon a strong Fortress,



*A Survey of War-like Fortification,  
and what is to be observed in Sieges,  
&c.*

IF a Town be defended by Out-works, a Ditch, or Mote Bastions, Flankers, Curtains, or Counter-mures, and the Garrison be strong, it was the old Way to build Forts at advantageous Places, but now they proceed in a Siege, by making Trenches, raising Batteries, Mining and gaining Lodgments, which indeed is the quicker way, and the most secure from the Cannon of the Town. The best Fortification is held to be built Octangular, by which means the force of the Cannon is much abated; for the points of the Angle slant the shot, or if it make a breach in the hollow Cavity, yet the Angles serve as Flankers on either side to hinder the Approaches of the Besiegers; so that it has happened when there has been a Breach wide enough to enter they durst not Attempt it; though indeed the manner of Fortification is various throughout *Europe*, yet the late Models have been indifferently uniform; and in case a Town be well fortified, and an Army comes to Besiege it, a serious View must be taken, and the true Nature of the Ground, as well as the Scituation of

of the Place, enquired into, with the Number of the Garrison, and especially the Courage, Conduct, and Reputation of him that Commands; for as it is in an Army so it is in a Town, a valiant Governour, whose Courage is carried on with Prudence, will better defend it with a small Garrison, than some with a very powerful one, as the famous City of *London-Derry* has instanced to the Immortal Honour of her worthy Governour, Mr. *G. Walker* whose Name shall live in spite of all that Malice can devise; *Vienna* likewise, under the brave *Staremborg*, in the year 1683. held out till Relieved against an Army of 120000 *Turks*, being the Flower of the *Ottoman* Empire, and yet these Cities had not any thing considerable to trust to in their Fortifications.

The place being viewed, and the ground ordered to be broke, the Pioneers once set on work, must make such Places or Lodgings that those who enter them may be able to succour their Fellows against any violent Sally of the Besieged, having Issues and Passages for passing and re-passing, as the best advantage shall require.

Having made these Advances, the Artillery must be planted upon Batteries, raised with Earth, and staked with Timber, secured with Gabions or Baskets filled with Earth, or else the Engineers cannot be secured from the

Fire of the Town, Wool-packs were formerly used on this occasion, and are not altogether laid aside in the present Management of Sieges, planting your Batteries something a-slant, that the Cannon, if recoiling, may the easilier be brought up again, and always in this there is one Battery bigger than the rest, called the Royal Battery, which generally fronts the Town besieged, and is frequently raised as high as the Walls, and these Batteries must labour to dismount the Cannon of the besieged, as well as batter the Walls, for thereby the Enterprize will be facilitated, but many times the Flankers are covered in a manner by the Counterscarp, which must thereupon be laid open, or possessed by the Besiegers to gain a more uninterrupted Access; and if the besieged Parly, and send out to make Terms, Hostilities ought to cease, till those that came out are returned, unless the Besiegers will refuse to hearken to any Parley, which is not often observed, unless the matter be carryed so far, that the Breaches are laid open, and there is no way for a longer Defence; then instead of gaining Conditions, they are forced to surrender on Discretion.

If by Battery, Mining, throwing Bombs, or a perpetual tiring the Enemy, the Town is Saultable, and a general Storm be intended, it must however be the General's care, as much as in him is, to keep his Intentions from the  
Besieged

Besieged, by pretending one thing, suddenly change the Order into another; for by it the Enemy is accused, and the Souldiers Spirits are kept up: This Rule was observed by the Duke of *Lorain*, in taking of *Buda*, and proved very successful, as it has done in the like upon other occasions.

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*The Court-Martial, or Council of VVar, what is to be considered therein.*

IT is necessary the young Souldier should have some insight in this Affair, to prevent his ignorantly incurring Danger; and in this Case in an Army, or Encampment, the Council of War meet at the General's Tent, or Quarters, and to this are called the Lieutenant-Generals, the Major-Generals, the Brigadiers, as likewise the Collonels, and Commanders of Bodies, where it is requisite, or concerns their Regiment.

There are private Court-Martials, or Councils of War, frequently held in Garrisons, and these may be held at the Governour's House or in any other convenient place, as the Governour shall appoint; or if it be in a Camp, it may be at the Collonel's Tent, and he thereupon is to send notice to the Captains of his Regiment to be present; those whose business it is to be there, being  
 assembled

assembled, the Collonel, or Governour, or whose Right it is to be President, takes place at the upper end of the Table, and the Captains in their Degree, and if there be no Judge-Advocate, or he be absent, the Town Major, Aid-Major, or Quarter-Master, discharges that Office, and accordingly take his place at the lower end of the Table.

As for the Lieutenants, Sub-Lieutenants, and Ensignes, they have Priviledge to be there, but only as Spectators with their Hats off; and if the Matter be of consequence, after it is opened by the President, the youngest Officers gives first his Opinion, and so the rest in Order, the President being the last, and being put all in Writing, the Matter happens conform to the plurality of Votes and then is to be signed by the President; if the matter is to be judged of by this Council or Court, then the Party accused is brought before them, and being informed of what he stands accused, the Questions proper to the matter of his Accusations are asked him, and then he has Liberty to reply, as in case of Civil Judicature; when being withdrawn in the Custody of the Marshal, who is the Goaler of this Court, the proof against him is considered, and every one gives his opinion upon his Conscience, and he stands or falls by the plurality of Voices; and being called in, and made acquainted with  
what

what has been determined, the Sentence is pronounced by the President in the name of the Court, &c. and if he be guilty 'tis the business of the Provost Marshal to see it put in Execution, and if the Punishment be publick the Regiment ought to be drawn up Spectators, as a Warning to them in offending, &c. but a Souldier for the Honour of the Profession is not to undergo any infamous Punishment before he be degraded of his Arms, and his Coat in publick stripp'd off; and to frame this Court, there must be no less than Seven, the President being one; many times for want of a sufficient number of Superiour Officers, Inferiour Officers are admitted, but not often.

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*Of divers Figures in Battel-Array, or for  
Firing, &c.*

There are various Figures wherein an Army or a Body of Men may be drawn up, besides these we have named; wherefore for the satisfaction of the more Curious, and for the greater Variety, it will be convenient to insert them by way of Prospect, &c.

If you would draw up a cross Battel in the following Figure, you may do it with a private Company, or as many as you please,  
and



and to bring them into form : The words of Command are *viz.*

The first Two Ranks wheel your Front into the midst.

The two last Ranks wheel your Rear into the midst.

These words being given, the next Command must be,

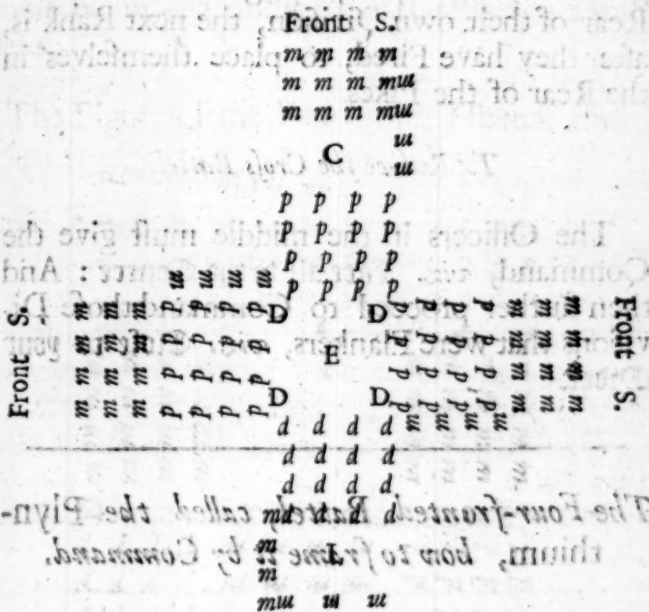
The Rest of the Body Face to the right and left, March.

The March must be continued till the Rear of the four Divisions make an even Hollow that may be square ; after that, the Commander must go into the middle, and give these words of Command, *viz.* To the Centre, face all ; by which means he may give them directions what to do, and then proceed to say, Face all about to the Right, which makes the cross Battle of the two Divisions one after the other : Then, *Face all to the proper Front.* So you have all your Musketers in the midst flanked with Pikes : Then *Musketers Face.*

The



## The Cross Battel.



Front S.

Face to the Right and Left outward. Pikes, face to the Right and left inward, Pass through, and interchange ground; so is your Body reduced to its first Front and Order.

If

If you would Fire upon this Figure, consider, there are two ways in general, and of these, the first, it is to be noted, when Musketers give Fire, thereupon placing themselves in the Rear of their own Division, the next Rank is, after they have Fired, to place themselves in the Rear of the Pikes.

*To Reduce the Cross Battel.*

The Officers in the middle must give the Command, *viz.* Face all to the Centre : And then further proceed to Command those Divisions that were Flankers, *viz.* Close to your Order.

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*The Four-fronted Battel, called the Plynthium, how to frame it by Command.*

TO order this, the Command must be, *viz.* Half Files of Pikes, Face to the Rear. March.

This they must observe till clear of the Ranks of the Musketers, and then the Command is,

Half Files of Musketers, Face to the Right and Left. March.

This must be done in Marching between the Divisions of Pikes; then the Word is, Left

Left Half Banks of the first Division of Musketeers, Face to the Right, and March between the Rear Division of Pikes.

In this case it is noted, that the Musketeers must be in the midst, and the Pikes as Flankers.

The Figure of the Four-fronted Bartel, etc.



To Fire upon this Figure, the Muskietiers must do it in Rank, and after Firing, wheel off to the Right, making their passage through the Intervals, and placing themselves in the Rear of their own Division successively, maintaining the same Ground; or if you would bring the Muskietiers to the Angles, and reduce the Pikes

to the middle, then must the Muskietiers take place on the Flanks when you make the Figure.

*To reduce this Figure.*

The whole Body is commanded to Face to the proper Front :- And then,

Muskietiers in the Rear, March up on the Left of the Muskietiers in the Front.

Muskietiers in the Flank, Face inward, and close your Division.

These Commands given, cause the Pikes to march up, taking their places directly after their Leaders, and by that means they will be brought into a solid square : The Commands are,

Muskietiers, Face to the Right and Left inward.

Pikes, Face inward, interchanging Ground.

*The Hollow-fronted Cross Battel, how to form it.*

**T**HE Files in this case being Eight Men in depth, the Words of Command are thus to be given,

The two first Ranks, wheel your Front into the midst.

Two

Two last Ranks, wheel your Rear into the midst.

The rest Face to the Right and Left.

March.

Here they must move untill they have made the Cross; then the Musketers must Flank the Pikes; as for example in the following Figure:

Proper Front.



Front of the Rear.

If you come to Fire in this Figure, it may be done every way, as at Front, Rear, and Flanks; the Fire made, they must wheel off by

by Division, and take their Stations in the Rear of their own Division, moving forward into the Leader's Ground, that the form of the Figure may not be altered; and when the second Fire is given, the Pikes must move leisurely up, Porting as they Advance, till they make an even Front with the Musketers; the second Firing made, those that Fired are to wheel, and place themselves in the Rear of that Division of Pikes which they Flanked; which Order, all the Ranks must observe upon Firing; and by the Pikes Charging and Re-advancing, the Figure will be preserved, and the Reducement may be observed in what is directed for the Reducement of the Cross Battel.

*How to frame the hollow Square with Angles, when required to be guarded with Pikes.*

**I**N this case, the Pikes being Advanced, the Command must be,

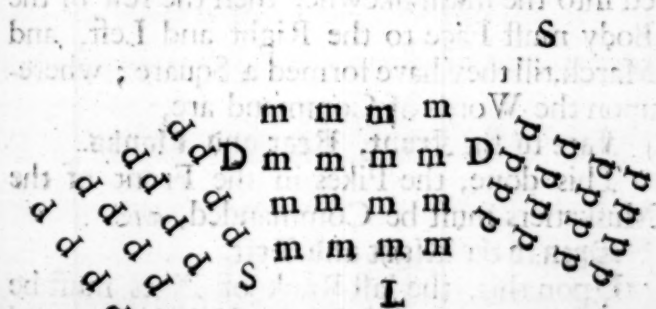
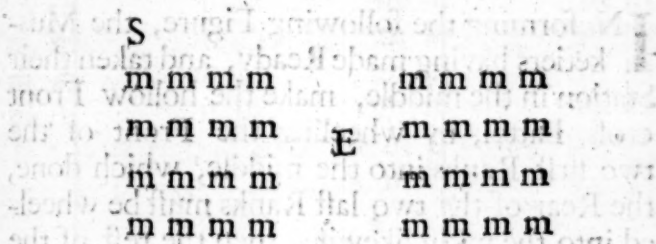
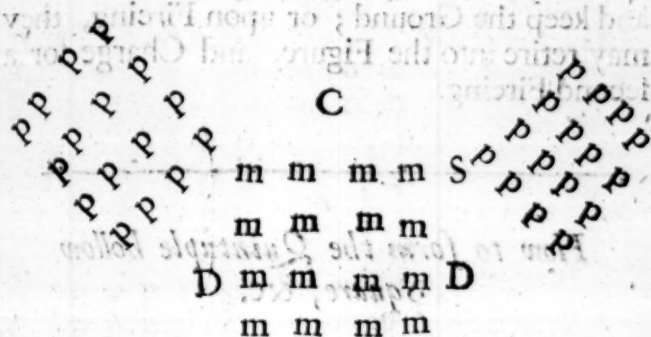
Pikes, Close your Divisions before the Musketers.

Pikes, Face all to the Right.

Upon this, they must Advance, and move into the space between the Angles of the Musketers

ketiers, by which means the following Figure will be formed, &c.

*Front.*





In Fireing upon this Figure, you have your choice to Fire, either to the Rear, Front, or Flank, as many Ranks as will stand with conveniency ; who, upon Fireing, must wheel off and keep the Ground ; or upon Fireing, they may retire into the Figure, and Charge for a second Fireing.

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*How to form the Quintuple hollow Square, &c.*

IN forming the following Figure, the Musketers having made Ready, and taken their Station in the middle, make the hollow Front cross Battel, by wheeling the Front of the two first Ranks into the middle, which done, the Rear of the two last Ranks must be wheeled into the midst likewise, then the rest of the Body must Face to the Right and Left, and March, till they have formed a Square ; whereupon the Words of Command are,

*Face to the Front, Rear and Flanks.*

This done, the Pikes in the Front of the Musketers must be Commanded, *viz.*

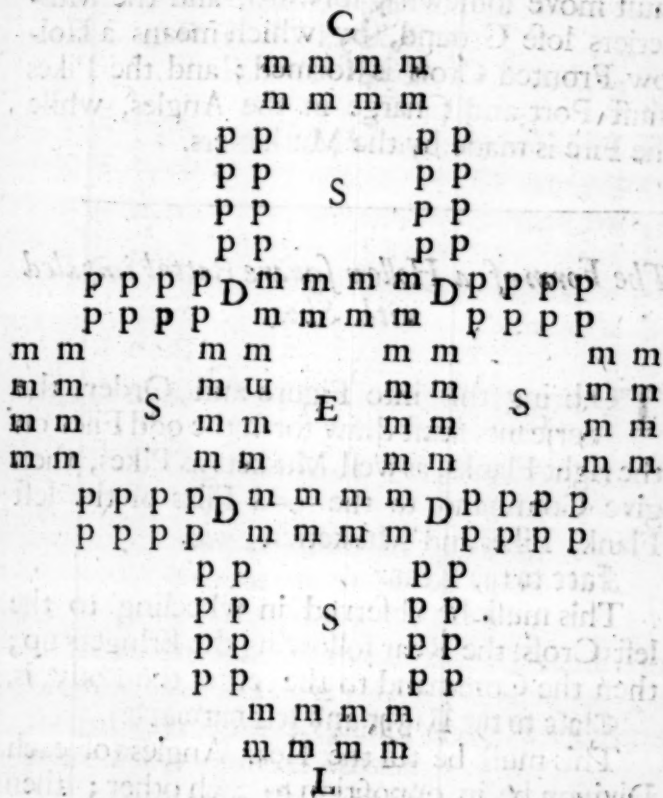
*Open to the Right and Left.*

Upon this, the last Rank of Pikes must be even with the the first Rank of Musketers, and then these Words of Command follow,

*Two*

Two first Banks of Musketers of each Division move forward, clear of the Pikes.

This done, the following Figure will be produced.



In Firing upon this Figure, the Command Musketers in the midst, Close to the Front, Rear, and Flanks.

Fire, &c.

I 3

The

The Musketers ought upon the first Firing to make good their Ground ; the second time Firing over, they must Rank even with the Pikes ; and upon the third Firing, the Pikes must move somewhat forward, and the Musketers lose Ground, by which means a Hollow-Fronted Cross is formed ; and the Pikes must Port and Charge in the Angles, while the Fire is made by the Musketers.

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*The Form of a Hollow square Battel impaled with Shot.*

**T**O bring this into Figure and Order, the Serjeants must draw forth the odd Files on the right Flanks, as well Muskets as Pikes, then give Command to the odd Files of the left Flank, Pikes and Musketers, viz.

*Face to the Rear.*

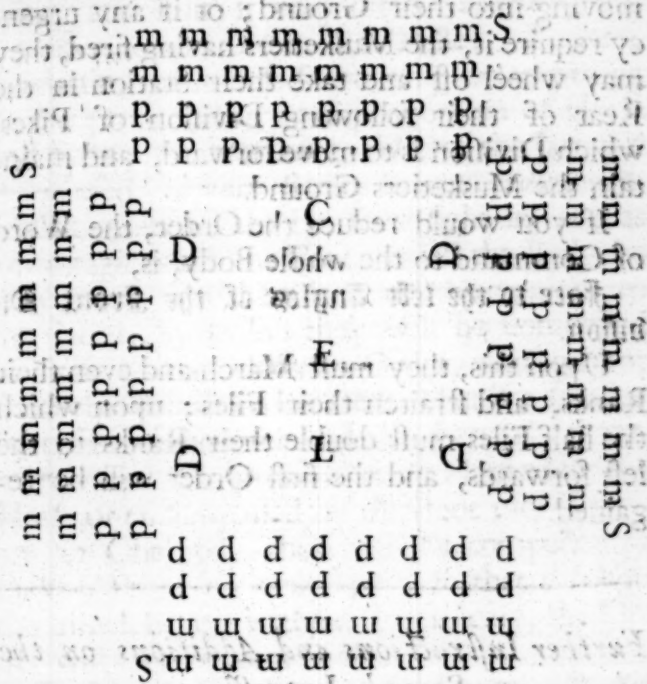
This must be observed in wheeling to the left Cross, the Rear following the Bringers up ; then the Command to the rest of the Body, is, *Close to the Right and left outward.*

This must be till the Rear Angles of each Division be in opposition to each other ; then the Command is,

*All Face to the Centre.*

*Face all about to the Right.*

By this means the following Figure is formed.



Note, In these Figures, that C stands for Commander in Chief; L for Lieutenant; E for Ensign; S for Serjeant; and D for Drums, P are Pikes, and M Muskets.

To Fire upon this Figure, when the Ranks of Muskeriers have Presented, and Fired, they are to wheel off to the right and left, through the Intervals, that so they may be made in the middle of each Division, as appears in the Fi

gure, and then they must place themselves in the Rear of their own Division, the next Rank moving into their Ground; or if any urgency require it, the Musketers having fired, they may wheel off and take their Station in the Rear of their following Division of Pikes, which Division is to move forward, and maintain the Musketers Ground.

If you would reduce the Order, the Word of Command to the whole Body, is,

Face to the left Angles of the Front Division.

Upon this, they must March and even their Ranks, and straiten their Files; upon which the half Files must double their Ranks to the left forwards, and the first Order will be regained.

*Further Instructions and Additions on the  
Second Impression.*

**I**N Military Affairs there are so many Intricacies, that although we have in this part laid down a great number very useful and profitable, yet according to the difficulties and emergencies that may happen abroad in Armies, on sundry occasions, it is altogether impossible, and not to be expected by the Reader, that all particulars should be contained in any Book,

Book, though of never so large a Volume; besides, many Nations differ in their Discipline, and shift it very often, as the Country offers to be more or less Hilley, Rockey, Campain, or inclosed Ground; or according to the proportion, or disproportion of Horse and Foot; for ever note, Where the Ground is inclosed, or very strait, it is exceeding disadvantageous for the Horse to fight in, and as advantageous for the Foot, unless the Body be very great, and then it is disadvantageous to the latter, by reason they will be compelled to fight at too close an Order, and cannot form the Battalions in extent; but if a smaller Party be to encounter a greater, then to be the securer they are to prevent being Flanked by the Horse, or encompassed by the Foot; for if they are so Charged, they will be compelled to make a Front on every part, so that through too much hurry, without special care, the Order will soon become broken.

To March in Lines, as the Imperialists did in advancing to fight the *Turkish* Army before *Vienna*, 1683. and routed their numerous Army, requires not only a Campain Country, but a slow and steady Order, with much firmness; for here they frequently March Regiments deep, when as square Angular, or Crescent, or Mooned Battels move more swiftly; however, these things ought to be considered in deliberate Counsel, on the Spot, if time will give opportunity.

*In Fording Rivers, what is to be observed.*

**T**HERE are few Countries without considerable Rivers, which prove considerable Lets to an Army in its Marching; for if there be any Bridges, unless they be defended by strong Forts, or Towns, the Enemy will not fail to break them down, either to delay, or hinder your Advance; for in many cases a Pass gained over a considerable River, is, as we may term it, the Battel it self gained; then if there be no Bridges, and halt will not suffer you to make one over with Boats, Planks, Casks, or other Materials; then having viewed the posture of the Enemy on the other side, if they be encamped there, or the Banks guarded, the best way is to endeavour to remove them with your Cannon, and Alarm them at several places, as if you would pass where you mean not to pass, and in the mean time send Parties to try where the Shallows are, and those must properly be Horsemen, one or two of them going into the River, and swimming their Horses in the Deep, till they find the Shallows; but if there be no Ford, there must be of necessity Boats, or a floating Bridge for the Foot; for although the Horse, as it is practicable, may swim the River, yet the Foot with their heavy Armes, and the Baggage, cannot do it.

When



When the Fords are found, it is convenient to plant several pieces of Cannon, if they be defended to batter the Ranks of the Enemies, so that they may pass under the shelter; if the Stream be rapid, the Horse ought to take the Stream-side, to break it off the Foot, for their more easie passage, and they must all keep up their Arms, lest being wet, they become unserviceable, and not to fire till they come close to the Shoar: This Order was held by the King's Army, passing the River *Boyne*, where, by his Majesty's excellent Courage and Conduct, a famous Victory was obtained over the French and Irish on the 1<sup>st</sup>. of *July*, 1690.

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*Of Prisoners taken in VVar, and their Privileges.*

**I**T cannot be expected by those that trade in War, and Souldiery, that in Fights, or being out upon Parties, or in Garrisons, a Man may be at one time or other made a Prisoner, and it behoves him to be cautious in this, for his safety, and sometimes for the safety of a whole Party: If in Fight a Man be forsaken by his Fellows, falls wounded, or is no longer able to resist, the force, or odds of those that oppose him; in such a case, the best way is to submit to the misfortune, by asking Quarter, and

and yielding up your Sword with the point towards you, to those that demand it, it being rash imprudence to exasperate an Enemy, in whose power you are, without any probable hopes of escaping, at whose disposal your Life is; for in hot Blood an Enemy will not stick to do that in cold Blood which he will be ashamed of; however, it becomes not a Man of Honour, when taken, either for threats, or promises, to discover the Councils, or further Intentions of his Party, but rather wait his better Fortune to be exchanged, ransomed, or rescued.

○ If you are out upon a Party to discover, beware you are not drawn into a Trap by the Enemies Party; for many times they will, if they find themselves the weaker, say, They are of the same Party; and so mixing with you, take an advantage to set upon you, or draw you into an Ambush; however, be brave, and if Resistance avails not, it is no dishonour hastily to retreat; but if taken, be not of so mean a Spirit, as to discover any thing to the disadvantage of your Friends.

In Garrison it is otherwise, though tending to the same purpose; for there the business is not so hasty, but they have time to make Conditions, which prove advantageous, or otherwise, according to the Strength, Weakness, or obstinate Resistance: The manner is, before a close Siege, to send a Summons to the Governour by a Trumpeter, or other hand, and  
upon

upon refusal, the Batteries are razed, Ground broke, &c. and here, if the Place be stormed, the Lives of all that are in it, are at the disposal of the Conqueror, which many times proves bloody and merciless, out of a Maxim of War, Policy, &c. to terrifie others to a speedier surrender: the Prisoners in this case, are either Prisoners at War, or at Discretion, and may be disposed of at the pleasure of the Victor; but after their submitting, and Quarter given, their Lives are secured from any After-clap, by the Articles and Rules of War.

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*Some Considerations in Retreating, after a Defeat, or being too weak for the Enemy.*

**I**T many times happens, that a brave Commander may be necessitated to a Retreat, either by being beaten, or perceiving himself too weak, and not able to fight the Enemy that approaches him: This must be done in as much order as can possible; and by such ways as are advantagious to stop the Enemy, by facing about; if they should press hard on the Rear, keeping some Parties of Horse at distance from the Body, to skirmish them, and if time will

will admit, break down such Bridges as you pass, to delay them, and refresh your Men, so that if you find they are eager in the pursuit, and you can get to no strong Hold, fortify in inclosed Ground, or Woods, as the place will admit, and by this means, from the advantageous Scituation, and Ambushes, you may lay Victory, and may declare on your side, and it may be in a short time in your power to pursue your Pursuers.

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### *Considerations and Cautions upon Pursuits.*

**A**lthough an Enemy be worsted, yet an undavised pursuit may be very prejudicial, to draw the Pursuers into an Ambush, as it has often happened, and the Scale of Battel; as it happened to the German, and confederate Forces against *Mahomet*, the second Emperor of the Turks, where the Christians too hastily disfranking, gave the Enemy, though routed before, opportunity of rallying and returning upon them to their utter Rout; and many Parties by following too hastily, have been cut off before others could come to their Assistance, and the Enemy has escap'd some time after a little Skirmishing; the Enemy flies  
in

in policy, to draw you into danger; but nothing has proved so fatal to Armies, as before they could be assured the Battel was perfectly won, to alight, disfrank, and fall to Plundering; for however great the Spoils be, the Honour of your Prince, and your own Safety, requires you to see the Enemy beaten out of the Field, without hopes of Rallying before you take the Spoil.

Being the

ART OF GUNNERY,

AND

Making Fire-Works for War, Recreation,

~~and other Matters.~~

Serving as a SUPPLEMENT

To the foregoing TREATISE.

**A** great Ordinance is an essential part of War, so it will not be amiss, but altogether convenient, to give the Practitioner in Engineering a prospect of those Affairs that must unavoidably concern him, and therefore he that would improve himself in this kind by Land or Sea, must first be conversant in knowing what Matters are requisite, as

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also

also to be skilled in Geometry and Arithmetick, the better to know what measures to take on sundry occasions that vary in themselves.

And to this purpose the Gunner must ever have Rammers, Scoops, Ladles, Sheep-skins with the Wool on, to sponge or clear the Piece; as likewise Canvase or fine Paste-board, to make Cartridges for the Powder, when the Piece is hot with often discharging, lest the Powder being put in loose, it fire of it self; he must have spare Wheels, and Axle-trees, lest any should break in the way, and so delay the March of an Army, which frequently happens to its great detriment; shot he must have of such sizes as the Pieces will bear, even to the full of the Calliber, lest forcibly rattling against, it flaw the Piece; he must likewise have case Shot to break the Front of an Enemy, open a passage, or clear a Deck when boarded; likewise Hand-spikes, Budge, Barrels, Baskets to carry Shot, Match, well Armed Linstocks, Torches, dark Lanthorns, and Compasses to measure the Piece and Shot, and to prevent breaking the Charge must be proportioned according to the thinnest Mettal of the Piece and in this case, the Charge being put in with your Scoup; if you are to Fire upon a Line, or under Mettal, you must be sure to clap in a good Wad after it, and ram it down, or else the hollowness of the Powder may chance to burst the Piece, not



only to the defeating your Design, but to the killing and wounding many Persons near it, which has but too sadly happened by carelessness; and to move or traverse your Piece, beside, Hand-spikes or Leavers, you must have Crows of Iron, Coins of Wood to lay it above or under Mettal, taking care to know the depth of the Chamber of the Piece, that the Charge may be agreeable; for if the Shot be too light, or too heavy for the Charge it will never answer your expectation.

Of Artillery, there are several kinds, *viz.* the Falconet, the Basilick, the Rabinet, the Falcon, the Minnion, the ordinary Minnion, the Sacker, the lowest sort, the ordinary Sacker, the Sacker of the elder make, the lowest Demiculverin, the eldest sort of Demiculverin, the ordinary Demiculverin, Culverin of the best size, ordinary Culverin, Culverin of the largest size, lowest Demicannon, ordinary Demicannon, Demicannon of the great size, Cannon Royal, or whole Cannon, being the biggest of all Ordnance,

According to the bigness and weights of the several Pieces, they must be charged both with Powder and Shot, and if we suppose a Piece to be in length eight Foot, and that this Piece weighs 1500 Pounds, having four Inches Diameter in the Bore, and you would know how much it requires, take notice that it requires Four pound of Powder to carry a Shot of sixteen

sixteen Pound 160 paces, at five large Feet to the pace, and do Execution, unless the Piece be defective, by Flaws or Honicombs within; and to try the first of these, as soon as ever the Piece is discharged, stop the Muzzle and Touch-hole, and if there be Flaws that come through, you will perceive the Smoak work through them; this is to be known likewise by an Iron Hand-spike, which will cause the Piece to jar, if the Flaws are considerable.

The Honicombs are certain spunginess or defects of the Mettal in casting, which may be perceived by reflecting the Light of a Looking-Glass held against the Sun into the Mouth of the Piece, or putting in a piece of Candle on a long Cleft-stick.

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*The Terms of describing a Piece and Shot, &c.*

THE outward Ring of the Breech is called the Cascable Deck, that Ring next the Touch-hole is called the Base Ring, and the place between the Touch-hole and the next Ring is called her Chamber, or Charging Cillinder, the next Ring is the Ramforce Ring, the third the Tronion, or Ballance Ring, and that next the Muzzle is called the Cornice Ring, and the uttermost Extremi-

ty is the Muzzle, the hollow is the Caliber, the top the Superficies, and the whole length the Chafe; so that he that will be a Gunner, must have these distinctions as ready as a Sailor has the Points of the Compass.

As for the Shot used, it is generally Iron, but sometimes Lead, and for want of these Stone, and these must be considered according to their weight and bigness, for there is a disproportion, if we consider the equality of their Weight, and this not being well observed, may be of great hindrance in halty Enterprizes, and the proportions are these.

Between Lead and Iron six to nine, by which it is observed, that a Shot of six Pounds Iron, is as big as nine Pounds Lead, and the proportion between Iron and Stone is three to eight, so that there is eighty to thirty; for a Shot of Stone of thirty Pound is proportionable in bigness to an Iron Shot of eighty Pounds; and in this manner you may guess of any kind.

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### *How to make Cartridges, &c.*

**I**N case a Piece is very hot by Exercise, and will not endure the Powder, then a Cartridge is necessary; to make them, you must have a Rowler of Wood to the bigness of  
your

your Piece, on which you must role Paffe-board or Paper, pasting it as you role, that it may lie firm and smooth; then having dried the Cases, fill them with Powder, and choak them at both ends with a small Cord, or you may stop the ends with Flax, and put it into your Piece, forcing it with the Rammer into the charging Celinder, then with a sharp Iron bore it at the Touch-hole, and Prime.

If you would shoot red hot Bullets as many times it is done at Sieges to fire Houses, you must, when you have rammed down your Cartridge, force a green Turf upon it, and then fling in the Shot; this way has been common, especially at Sea, but since Bombs, Hand-Granado's, Stink-pots, &c. have been in use, it is not often practiced.

*Observations in Ballancing a Piece.*

**Y**OU must ever observe in Marching, that the Carriages are proportioned to the Piece to prevent overthrowing, or breaking, so that to set them true, one and a half of the length of the Cellinder or Chamber should be the length of the Carriage-Stock, and the depth of four Diameters of the Concave of the Bore in the middle, but at that part next the ground, about the proportion of the Diameter of the Shot will suffice;

as for the Wheels they must be strong, and the height for Land-Service about half the length of the Piece, but on Shipboard lower Carriages are in use ; the Turneons or bearers of the Piece must be laid on equal heights upon the turning Irons of the Stock, that the Piece may stand true mounted, lest swerving to any side the Shot become Random, and in this case two thirds of the Piece must appear above their Centre, having Cordage ever ready to move or turn them, especially for braces at Sea, for many times a Ship is over-set and in danger to be lost by their breaking loose through the defect of Tackle.

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*Further Instructions necessary to be known.*

**E**Ver observe that your Budge-Barrel, Leather Bag, or Cartridges of Powder lie on the windy side of you, lest a spark flying from your Match, blow it up ; and after a Discharge having cleansed the Concave with your Sheeps-Skin Furbisher, fill your Ladle, but not so full as to scatter any, and having Charged it as home into the Piece as you can, give it a sudden turn with your Thumb and Finger, keeping your Body for  
your

your own safety clear of the Muzzle, and so quickly drawing it out, clap in your Wad, and force it down, that the Powder may not lie hollow in the Chamber ; then put the Shot in and wad it down, having the Touch-hole all this while covered, least any spark should fall in ; then having a Linstock well armed with a good Match and Coal, prime with small Powder, drawing a Train from the Touch-hole, and fire one end of it ; for if you should hold your Match upon the Touch-hole, the force of the Powder would blow it away.

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*Directions for Shooting at Random, or at a Mark.*

**I**F your business lies to Shoot at Random, or at a Mark then you are to consider the Random of a Piece is its entire distance from the place where you discharge, to the place where the Bullet first lights or grazes on a level Line, called a Horizontal plain ; and to gain the true knowledge of this, the ground must be level where it is put in practice, so that the level of the shot may not be hindred, and having taken notice of the distance of ground from the Piece to the fall of the Bullet, mount the Muzzle a degree higher,

K 4

observing

observing again the same notice, by which through many degrees you will be capable of knowing, upon the Level or Ascendant, how many paces the Piece will carry with more or less Powder, which may be raised even to a tenth degree, or as high as the Piece can be mounted, so these distances well understood, the Gunner may know how to direct his Piece either at a Bastion, Castle-Wall, Curtain, Ravelin, Counterscarp, against the Batteries of Besiegers, or into their Trenches, or he may batter the Ranks of an Army at a great distance, and many other things incident to true Rules of Fireing, even to the striking a Ship under Sail; but in fireing at a thing in Motion you must consider the swiftness of it, and Fire in your aim a distance before, and so the Bullet by that it moves that space, will be there, for although a Bullet is carried with impetuosity, yet all Motions require time.

If you would strike down a Light in the Stern of a Ship, or in a Castle, if it be in the Night time, you must stick directly on the top of the Muzzle of your Piece, either a Piece of Wax-Candle lighted, or a fired Match, by which means you will bring that and the other Light together, so as to take a fair Mark; and to know whether they are brought together, stick up a Nail with a peice of Wax or Clay, on the breach of the  
 Peice



Peice, and bring that and the other two to bear with each other.

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*How to take out a Shot that sticks in a Piece, and cool her, to make her recover her Force.*

**I**T many times happens through too much hastiness, or that a Shot is mistaken, or that the Powder, for want of being rammed down makes it stick half way, so that it is dangerous to discharge it, without breaking the Piece; in this Case let it descend, lowering its Muzzle, and then having dissolved Bay Salt, or other Salt in Vinegar, put it into the Touch-hole and it will dissolve the Powder, then strike on the Piece with a Hand-spike where the Bullet lyes, and it will rowl out, having before given it a thrust or two with the Rammer to loosen it.

It is taken notice of by all Gunners, that the oftner a Piece is discharged, it by growing hot loses more its force, and will not carry the third or fourth time so far as it will the first or second, every time abating somewhat; so that you must cool it, which is much the better done with Vinegar; for that not only carries off the heat, but by the sharpness of its Quality recovers the lost force.

*What*

*What Powder is made on, and how to try  
its Goodness.*

**P**OWDER, a fatal instrument of Death, and almost of incredible Force, was first found by one *Bartholdus Swart* a Monk, by a spark of Fire, accidentally falling amongst some of his Chymical Preparations, but since, as to its Force, has been much improved; it is made of the Quintessence of Salt-peter, Brimstone, and Coal-Dust, by grinding and other means; however in long lying after it is made, it will lose much of its Force, the strength of the Salt-Peter tending down-wards, and that of the other matters upwards, and the first thing to know whether it be good or not, is to handle it, and observe whether it be well dried and corned, this being noted, lay a few Corns scattering upon a Sheet of white Paper, and set Fire to them; when if so it happens, there is a black Mark, or findge, with a noisom smell left behind, then the Powder is not good, but if there be little or no Mark, or a clear blewish Mark, then conclude it fit for Service, but naughty Powder may be made up again, and strengthened with Salt-Peter,

*How*

*How to Charge a Mine, blow up a House, to prevent the Progress of Fire, or a Ship that is Sunk.*

1. **M**ines are various, some already advantageous by Vaults, others must be carried on under Ground, great difficulties being met withal, at Rocks, or Springs of Water, however the Mine being made, if there be any considerable quantity of Water, the Mines, for dryness of the Powder, ought to be Charged with Barrels of Powder, whereas those that are drier may be Charged with Bags or Sacks, the Train laid by Match, and six Inches of good Match will burn an hour, but for quick Execution, a Train may be laid into some Trench through Cain Troughs or upon Boards, and great Care must be taken that it be so Charged, that it refund not, or burst out upon those that spring it.

2. To take a House directly up, that it shall fall directly, as we may say, in the place where it stood, though shattered to pieces, place the Powder, if there be any Cellars directly under the main Beam, lay a Train upon Boards from the Bung-hole of the Barrel, covering it to prevent Sparks falling in the Train, and place at the head of the Train a piece of Wild-fire; when having given notice

tice by beat of a Drum, set Fire to that with your lighted Match, at the end of a Linstock, and retire to a Coverture for fear of any scattering Tiles or Timber; if you would throw it side-ways from the Fire, place the Powder near the contrary side, under a substantial Beam, and it will cast it as you wish, so the Timber may be drawn away without danger.

Many times it happens that a Ship sinks in a River or Channel, and is not worth weighing, yet obstructs the Passage, especially at low Water, here you must send down a Diver to find the entrance in the Hold of the Ship, and that found, fix a Leather Pipe with Pitch or Rosin into the Bung of the Barrel of Powder, that the end of the Pipe may be above Water when the Barrel is in the Hold which must be sunk and guided down by Cords, then the top of the Pipe floating by help of Bladders, the Boat that waits must with a long pair of Tongues put a hot Iron Bolt down it, and make off as fast as may be, else the Powder taking Fire the Wreck will float, and endanger the over-setting it, or this may be done with a long hollow Fishing Cane.

*Fire-works for VVar, used on sundry occasions ; the manner of making and using them.*

**M**ost Fire-works used in Seiges, are of late thrown out of Mortars, the best Mortars being made of Brass or Copper, though sometimes of Paste-board and Wood.

If the Bore of a Mortar happen to be ten Inches in Diameter, it ought to be a Foot and nine Inches in length, and the Chamber three Inches and a half in Diameter, and in depth five Inches, the Mettal above the Port, Fire, to be three Inches and a half in thickness, and so lessening to two Inches ; as for the planting these Mortars, the ways are not difficult, for they are mostly played Mounting, yet the Engenier ought to be well skilled to direct a Granado Shell to any particular place ; for upon his delivering it, he ought to know justly where it will fall ; likewise his Fuzees must be so exactly made, that they will not break till they are in the place designed for Execution.

*How to make, or Order a Granado.*

**A** Granado is first properly called so, in relation to its Shell, for the Shell to contain the matter are cast with hollow Cavities, and a small vent frequently of Iron, but sometimes Brass, Copper, Glass, and Earth; these, if designed to blow up, or beat down, are usually filled with dry Powder, and an Iron hollowed or Pistol Barrel rammed with Wild-fire made of Brimstone-Flower, Dust of Powder, Salt-peter, and Oyl of Petrolum, drove into the Vent of the filled Shell to an Inch; when the Mortar being Charged, the Granado must be slung in with Ropes put in the Hooks of the Shell if it be very great; then having taken your Aim, you must, a minute before you give Fire, Fire the Fuzee, then by Fireing the Mortar, send it away to the place designed; and of such deadly force is this Engine of Mischiefe, that falling upon a Castle, Church, or House, it breaks through to the lowermost Floor, beating down all before it, and then blows up and rends in a terrible manner, the Shell breaking in a thousand peices.

Note

Note, That in this Additional Part of Fire-works, written, and inserted to accommodate the *Second Impression* of this Book, I shall lay down such as may tend to the advantage of War, and some for Recreation, so that as well in Peace as War, the Book may prove grateful to the Reader.

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*Granado's more effectually to Fire Houses, &c.*

**T**AKE strong Canvas and role it upon a Ball of Wood, then dapple it over with warm Glew, or Pitch, and so put on another laying of Canvas, and continue so to do, till it is about an Inch and a half thick, still pitching, or glewing it, then bind it over with small pitched Cord, leaving much so much space as you may cut it in two, to take it off the Ball, then clap over another Coat, to bind the halves together; when you have filled them with Brimstone, Pitch, Tow, Rosin, and such like combustible matter, placing as much dry Powder as will fire and break it; this done, put in a Fuzee, as in the other Granado, and send it out of a Mortar, and it will beat down, and fire in a terrible manner all that is combustible.

*Carcaſes,*



*Carcases, how made.*

The destroying Engine is held to be the late invention of a Spanish Enginier, and was used with great success at the famous Siege of *Buda*, and *Belgrade*, not long since taken from the *Turks*; the Case is somewhat oblong, made of Leather, Pasteboard, and Canvas, bound about with small Iron Hoops, or strong twist-Wyre, and is filled with Turpentine, Salt-peter, Wild-fire, Brimstone, Flax dipped in Linseed Oyl, and Tar, with a sufficient quantity of Powder to fire and break it: This being sent into the Air, comes down with horrible blazing, like a sheet of Flame scattering its Fire a vast distance, so that many Houses are fired at once, and many times great Stones are bound up in it, which falling, destroy those that are under them.

*To make Trees, or Fountains of Fire, or golden Rain appear in the Air.*

Take as many small Serpents as you can place on the head of a great Rocket, in an upper Case that must go over it, and if they go off before the Rocket comes to its height, they will spring up like branches of Trees of Fire, but if upon its declension, then like Fountains or Streams of Fire, golden Rain, &c.

F I N I S.

